

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE  
FIRST SET OF INFORMATION REQUESTS FROM UWUA LOCAL 273  
D. T. E. 05-27

Date: July 9, 2005

Responsible: Danny G. Cote, General Manager

UWUA-1-13 (a) Please provide a schedule tabulating Bay State's operations and maintenance expenditures from January 1, 1998 to present. Separate out, if available, the O & M expenditures for service lines versus main repairs. To the extent any portion of these expenses are based on billings or allocations from Bay State or NiSource affiliates, please identify those amounts and explain the basis for making any such allocations.

(b) Please provide a schedule tabulating Bay State's capital expenditures from January 1, 1998 to present. Separate out the capital expenditures for service line replacements or extensions and main replacements or extensions. To the extent any portion of these expenses are based on billings or allocations from Bay State or NiSource affiliates, please identify those amounts and explain the basis for making any such allocations.

(c) Please provide a general description of how Bay State decides to classify expenditures as O & M versus capital expenditures.

Response: (A) Please see Attachments UWUA-1-13 (a1), UWUA-1-13 (a2), UWUA-1-13 (a3).

(B) Please see Attachment UWUA-1-13 (b). None of these expenses are based on billings or allocations from Bay State or NiSource affiliates.

(C) The Company's current capitalization threshold for the purchase of General Plant equipment is \$1,000.00 per individual unit. Therefore, any expenditure for an individual unit totaling less than \$1,000, is charged to the appropriate operating expense.

General Plant consists of the following type of equipment: office furniture and equipment (i.e., desk, chair, cabinet, table, etc.), tools and equipment (i.e., paving breaker, leak detector, boring machine, pipe locator, etc.), computers and related equipment (i.e., personal computer, printer, server, monitor, etc.), and miscellaneous equipment (i.e., breathing equipment, ice machine, refrigerator, television, etc.).

The basis for determining whether a purchase of General Plant equipment is to be expensed or capitalized is generally determined by the individual, or unit price of the item, and not the invoice total. For example:

the purchase of 30 chairs at a unit price of \$300.00 each is expensed, even though the invoice totals \$9,000.00.

Asset Accounting will reverse any invoice that is improperly classified as a capital expenditure, and credit the appropriate O&M account.

Gas Operation and Maintenance Expenses -- Per pages 45,46,47 Annual DTE reports

	1998	1999	2000	2001	2002	2003	2004
Total Production Expenses	200,721,440	172,869,001	228,314,706	264,816,504	192,584,560	270,384,719	326,855,062
Transmission and Distribution	22,038,994	23,012,005	22,266,412	20,888,457	20,403,973	21,682,879	23,812,600
Customer Accounts	11,278,582	10,677,945	12,433,330	9,909,792	15,423,193	19,099,524	17,251,657
Sales Expenses	2,802,452	2,205,411	2,118,170	1,125,795	2,052,816	303,584	431,788
Admin and General	49,052,016	38,200,754	40,923,352	43,245,856	55,456,048	53,900,933	54,519,888
Total Gas Operation and Maintenance Expenses	285,893,484	246,965,116	306,055,971	339,986,404	285,920,590	365,371,639	422,870,995
	285,893,484	246,965,116	306,055,971	339,986,404	285,920,590	365,371,639	422,870,995
	0	0	0	0	0	0	0
Less Production Expenses	(200,721,440)	(172,869,001)	(228,314,706)	(264,816,504)	(192,584,560)	(270,384,719)	(326,855,062)
Net Regular O&M	85,172,044	74,096,114	77,741,265	75,169,900	93,336,030	94,986,920	96,015,933

**BAY STATE MASSACHUSETTS**

**0103 LEAK REPAIR SERVICE 1998 - 2004**

Location	Description	Volumes	Hours	Labor	Purchases	Material	Other	Total
Year 1998	Leak Repair Service	369	(1,937.0)	128,519	34,130	26,159	-	188,808
	Percent			68%	18%	14%	0%	100%
	Per Unit		(5.2)	\$348.29	\$92.49	\$70.89	\$0.00	\$511.67
	Labor Rate	(\$66.35)						
Year 1999	Leak Repair Service	302	6,668.0	182,367	48,432	37,087	-	267,886
	Percent			68%	18%	14%	0%	100%
	Per Unit		22.1	\$603.86	\$160.37	\$122.80	\$0.00	\$887.04
	Labor Rate	\$27.35						
Year 2000	Leak Repair Service	247	3,848.0	60,877	23,564	21,534	-	105,975
	Percent			57%	22%	20%	0%	100%
	Per Unit		15.6	\$246.47	\$95.40	\$87.18	\$0.00	\$429.05
	Labor Rate	\$15.82						
Year 2001	Leak Repair Service	147	1,121.0	33,147	11,984	18,434	-	63,565
	Percent			52%	19%	29%	0%	100%
	Per Unit		7.6	\$225.49	\$81.52	\$125.40	\$0.00	\$432.41
	Labor Rate	\$29.57						
Year 2002	Leak Repair Service	244	2,601.0	74,708	11,663	30,216	(3,176)	113,411
	Percent			66%	10%	27%	-3%	100%
	Per Unit		10.7	\$306.18	\$47.80	\$123.84	(\$13.02)	\$464.80
	Labor Rate	\$28.72						
Year 2003	Leak Repair Service	250	4,990.0	159,683	28,919	32,214	-	220,816
	Percent			72%	13%	15%	0%	100%
	Per Unit		20.0	\$638.73	\$115.68	\$128.86	\$0.00	\$883.26
	Labor Rate	\$32.00						
Year 2004	Leak Repair Service	230	3,530.0	111,352	32,687	44,014	-	188,053
	Percent			59%	17%	23%	0%	100%
	Per Unit		15.3	\$484.14	\$142.12	\$191.37	\$0.00	\$817.62
	Labor Rate	\$31.54						
<b>Total</b>								
	Percent			65%	17%	18%	0%	100%
	Per Unit		11.6	\$419.59	\$106.98	\$117.19	(\$1.78)	\$641.99

**BROCKTON**

**0103 LEAK REPAIR SERVICE 1998 - 2004**

Location	Description	Volumes	Hours	Labor	Purchases	Material	Other	Total
Year 1998	Leak Repair Service	237	2,294.0	84,374	17,136	23,218	-	124,728
	Percent			68%	14%	19%	0%	100%
	Per Unit		9.7	\$356.01	\$72.30	\$97.97	\$0.00	\$526.28
	Labor Rate	\$36.78						
Year 1999	Leak Repair Service	175	2,270.0	64,063	27,673	23,151	-	114,887
	Percent			56%	24%	20%	0%	100%
	Per Unit		13.0	\$366.07	\$158.13	\$132.29	\$0.00	\$656.50
	Labor Rate	\$28.22						
Year 2000	Leak Repair Service	144	2,175.0	62,085	16,977	19,709	-	98,771
	Percent			63%	17%	20%	0%	100%
	Per Unit		15.1	\$431.15	\$117.90	\$136.87	\$0.00	\$685.91
	Labor Rate	\$28.54						
Year 2001	Leak Repair Service	53	800.0	24,210	3,205	16,261	-	43,676
	Percent			55%	7%	37%	0%	100%
	Per Unit		15.1	\$456.79	\$60.47	\$306.81	\$0.00	\$824.08
	Labor Rate	\$30.26						
Year 2002	Leak Repair Service	113	423.0	14,078	(1,293)	25,015	-	37,800
	Percent			37%	-3%	66%	0%	100%
	Per Unit		3.7	\$124.58	(\$11.44)	\$221.37	\$0.00	\$334.51
	Labor Rate	\$33.28						
Year 2003	Leak Repair Service	147	2,834.0	100,570	18,137	27,769	-	146,476
	Percent			69%	12%	19%	0%	100%
	Per Unit		19.3	\$684.15	\$123.38	\$188.90	\$0.00	\$996.44
	Labor Rate	\$35.49						
Year 2004	Leak Repair Service	130	1,734.0	58,510	22,876	26,711	-	108,097
	Percent			54%	21%	25%	0%	100%
	Per Unit		13.3	\$450.08	\$175.97	\$205.47	\$0.00	\$831.52
	Labor Rate	\$33.74						

Total	999	12,530.0	407,890	104,711	161,834	-	674,435
	Percent		60%	16%	24%	0%	100%
	Per Unit	12.5	\$408.30	\$104.82	\$162.00	\$0.00	\$675.11

**LAWRENCE**

**0103 LEAK REPAIR SERVICE 1998 - 2004**

Location	Description	Volumes	Hours	Labor	Purchases	Material	Other	Total
Year 1998	Leak Repair Service	<b>43</b>	<b>153.0</b>	<b>8,068</b>	<b>9,566</b>	<b>871</b>	<b>-</b>	<b>18,505</b>
	Percent			44%	52%	5%	0%	100%
	Per Unit		3.6	\$187.63	\$222.47	\$20.26	\$0.00	\$430.35
	Labor Rate	\$52.73						
Year 1999	Leak Repair Service	<b>17</b>	<b>143.0</b>	<b>3,701</b>	<b>1,415</b>	<b>1,865</b>	<b>-</b>	<b>6,981</b>
	Percent			53%	20%	27%	0%	100%
	Per Unit		8.4	\$217.71	\$83.24	\$109.71	\$0.00	\$410.65
	Labor Rate	\$25.88						
Year 2000	Leak Repair Service	<b>22</b>	<b>245.0</b>	<b>6,015</b>	<b>4,829</b>	<b>1,746</b>	<b>-</b>	<b>12,590</b>
	Percent			48%	38%	14%	0%	100%
	Per Unit		11.1	\$273.41	\$219.50	\$79.36	\$0.00	\$572.27
	Labor Rate	\$24.55						
Year 2001	Leak Repair Service	<b>16</b>	<b>201.0</b>	<b>5,339</b>	<b>2,632</b>	<b>113</b>	<b>-</b>	<b>8,084</b>
	Percent			66%	33%	1%	0%	100%
	Per Unit		12.6	\$333.69	\$164.50	\$7.06	\$0.00	\$505.25
	Labor Rate	\$26.56						
Year 2002	Leak Repair Service	<b>40</b>	<b>422.0</b>	<b>12,476</b>	<b>6,116</b>	<b>1,619</b>	<b>(1,180)</b>	<b>19,031</b>
	Percent			66%	32%	9%	-6%	100%
	Per Unit		10.6	\$311.90	\$152.90	\$40.48	(\$29.50)	\$475.78
	Labor Rate	\$29.56						
Year 2003	Leak Repair Service	<b>22</b>	<b>249.0</b>	<b>7,474</b>	<b>1,967</b>	<b>655</b>	<b>-</b>	<b>10,096</b>
	Percent			74%	19%	6%	0%	100%
	Per Unit		11.3	\$339.73	\$89.41	\$29.77	\$0.00	\$458.91
	Labor Rate	\$30.02						
Year 2004	Leak Repair Service	<b>16</b>	<b>295.0</b>	<b>9,113</b>	<b>5,376</b>	<b>1,097</b>	<b>-</b>	<b>15,586</b>
	Percent			58%	34%	7%	0%	100%
	Per Unit		18.4	\$569.56	\$336.00	\$68.56	\$0.00	\$974.13
	Labor Rate	\$30.89						
<b>Total</b>								
	Percent			57%	35%	9%	-1%	100%
	Per Unit		9.7	\$296.51	\$181.26	\$45.26	(\$6.70)	\$516.32

**SPRINGFIELD**

**0103 LEAK REPAIR SERVICE 1998 - 2004**

Location	Description	Volumes	Hours	Labor Purchases	Material	Other	Total	
Year 1998	Leak Repair Service	89	(4,384.0)	36,077	7,428	2,070	-	45,575
		Percent		79%	16%	5%	0%	100%
		Per Unit	(49.3)	\$405.36	\$83.46	\$23.26	\$0.00	\$512.08
		Labor Rate	(\$8.23)					
Year 1999	Leak Repair Service	110	4,255.0	114,603	19,344	12,071	-	146,018
		Percent		78%	13%	8%	0%	100%
		Per Unit	38.7	\$1,041.85	\$175.85	\$109.74	\$0.00	\$1,327.44
		Labor Rate	\$26.93					
Year 2000	Leak Repair Service	81	1,428.0	(7,223)	1,758	79	-	(5,386)
		Percent		134%	-33%	-1%	0%	100%
		Per Unit	17.6	(\$89.17)	\$21.70	\$0.98	\$0.00	(\$66.49)
		Labor Rate	(\$5.06)					
Year 2001	Leak Repair Service	78	120.0	3,598	6,147	2,060	-	11,805
		Percent		30%	52%	17%	0%	100%
		Per Unit	1.5	\$46.13	\$78.81	\$26.41	\$0.00	\$151.35
		Labor Rate	\$29.98					
Year 2002	Leak Repair Service	91	1,756.0	48,154	6,840	3,582	(1,996)	56,580
		Percent		85%	12%	6%	-4%	100%
		Per Unit	19.3	\$529.16	\$75.16	\$39.36	(\$21.93)	\$621.76
		Labor Rate	\$27.42					
Year 2003	Leak Repair Service	81	1,907.0	51,639	8,815	3,790	-	64,244
		Percent		80%	14%	6%	0%	100%
		Per Unit	23.5	\$637.52	\$108.83	\$46.79	\$0.00	\$793.14
		Labor Rate	\$27.08					
Year 2004	Leak Repair Service	84	1,501.0	43,729	4,435	16,206	-	64,370
		Percent		68%	7%	25%	0%	100%
		Per Unit	17.9	\$520.58	\$52.80	\$192.93	\$0.00	\$766.31
		Labor Rate	\$29.13					

Total	614	6,583.0	290,577	54,767	39,858	(1,996)	383,206
	Percent		76%	14%	10%	-1%	100%
	Per Unit	10.7	\$473.25	\$89.20	\$64.92	(\$3.25)	\$624.11

**BAY STATE MASSACHUSETTS**

**0102 LEAK REPAIR MAIN 1998 - 2004**

Location	Description	Volumes	Hours	Labor	Purchases	Material	Other	Total
Year 1998	Leak Repair Main	1163	8,230.0	560,243	285,423	81,381	-	927,047
	Percent			60%	31%	9%	0%	100%
	Per Unit		7.1	\$481.72	\$245.42	\$69.98	\$0.00	\$797.12
	Labor Rate	\$68.07						
Year 1999	Leak Repair Main	1286	30,016.0	904,275	439,690	100,703	-	1,444,668
	Percent			63%	30%	7%	0%	100%
	Per Unit		23.3	\$703.17	\$341.91	\$78.31	\$0.00	\$1,123.38
	Labor Rate	\$30.13						
Year 2000	Leak Repair Main	1428	34,217.0	856,708	381,021	94,915	(1,703)	1,330,941
	Percent			64%	29%	7%	0%	100%
	Per Unit		24.0	\$599.94	\$266.82	\$66.47	(\$1.19)	\$932.03
	Labor Rate	\$25.04						
Year 2001	Leak Repair Main	1256	31,289.4	845,377	339,222	90,417	-	1,275,016
	Percent			66%	27%	7%	0%	100%
	Per Unit		24.9	\$673.07	\$270.08	\$71.99	\$0.00	\$1,015.14
	Labor Rate	\$27.02						
Year 2002	Leak Repair Main	1504	35,025.9	954,912	326,244	101,650	(33,971)	1,348,835
	Percent			71%	24%	8%	-3%	100%
	Per Unit		23.3	\$634.91	\$216.92	\$67.59	(\$22.59)	\$896.83
	Labor Rate	\$27.26						
Year 2003	Leak Repair Main	1855	39,180.1	1,230,017	494,118	126,658	(7,252)	1,843,541
	Percent			67%	27%	7%	0%	100%
	Per Unit		21.1	\$663.08	\$266.37	\$68.28	(\$3.91)	\$993.82
	Labor Rate	\$31.39						
Year 2004	Leak Repair Main	1756	39,433.2	1,271,118	572,854	165,892	(5,275)	2,004,589
	Percent			63%	29%	8%	0%	100%
	Per Unit		22.5	\$723.87	\$326.23	\$94.47	(\$3.00)	\$1,141.57
	Labor Rate	\$32.23						
<b>Total</b>								
	Percent			65%	28%	7%	0%	100%
	Per Unit		21.2	\$646.24	\$276.99	\$74.32	(\$4.70)	\$992.84



**BROCKTON**

**0102 LEAK REPAIR MAIN 1998 - 2004**

Location	Description	Volumes	Hours	Labor	Purchases	Material	Other	Total
Year 1998	Leak Repair Main	614	5,420.0	270,840	100,024	43,519		414,383
	Percent			65%	24%	11%	0%	100%
	Per Unit		8.8	\$441.11	\$162.91	\$70.88	\$0.00	\$674.89
	Labor Rate	\$49.97						
Year 1999	Leak Repair Main	674	13,157.0	340,159	159,524	56,845		556,528
	Percent			61%	29%	10%	0%	100%
	Per Unit		19.5	\$504.69	\$236.68	\$84.34	\$0.00	\$825.71
	Labor Rate	\$25.85						
Year 2000	Leak Repair Main	846	16,382.0	480,805	219,839	57,255	(1,703)	756,196
	Percent			64%	29%	8%	0%	100%
	Per Unit		19.4	\$568.33	\$259.86	\$67.68	(\$2.01)	\$893.85
	Labor Rate	\$29.35						
Year 2001	Leak Repair Main	738	15,771.1	452,492	185,313	53,657	-	691,462
	Percent			65%	27%	8%	0%	100%
	Per Unit		21.4	\$613.13	\$251.10	\$72.71	\$0.00	\$936.94
	Labor Rate	\$28.69						
Year 2002	Leak Repair Main	797	19,309.5	509,137	136,440	30,168	(27,658)	648,087
	Percent			79%	21%	5%	-4%	100%
	Per Unit		24.2	\$638.82	\$171.19	\$37.85	(\$34.70)	\$813.16
	Labor Rate	\$26.37						
Year 2003	Leak Repair Main	1109	24,329.3	780,855	307,288	71,746	(7,575)	1,152,314
	Percent			68%	27%	6%	-1%	100%
	Per Unit		21.9	\$704.11	\$277.09	\$64.69	(\$6.83)	\$1,039.06
	Labor Rate	\$32.10						
Year 2004	Leak Repair Main	971	22,165.4	740,704	337,929	79,700	(588)	1,157,745
	Percent			64%	29%	7%	0%	100%
	Per Unit		22.8	\$762.83	\$348.02	\$82.08	(\$0.61)	\$1,192.32
	Labor Rate	\$33.42						
<b>Total</b>								
	Percent			66%	27%	7%	-1%	100%
	Per Unit		20.3	\$621.85	\$251.58	\$68.34	(\$6.53)	\$935.24

**LAWRENCE**

**0102 LEAK REPAIR MAIN 1998 - 2004**

Location	Description	Volumes	Hours	Labor	Purchases	Material	Other	Total
Year 1998	Leak Repair Main	251	2,525.0	98,487	137,334	5,232		241,053
	Percent			41%	57%	2%	0%	100%
	Per Unit		10.1	\$392.38	\$547.15	\$20.84	\$0.00	\$960.37
	Labor Rate	\$39.00						
Year 1999	Leak Repair Main	244	5,837.0	306,982	205,584	17,199		529,765
	Percent			58%	39%	3%	0%	100%
	Per Unit		23.9	\$1,258.12	\$842.56	\$70.49	\$0.00	\$2,171.17
	Labor Rate	\$52.59						
Year 2000	Leak Repair Main	222	6,657.0	161,313	105,193	21,083		287,589
	Percent			56%	37%	7%	0%	100%
	Per Unit		30.0	\$726.64	\$473.84	\$94.97	\$0.00	\$1,295.45
	Labor Rate	\$24.23						
Year 2001	Leak Repair Main	191	5,835.1	140,590	84,747	16,516	-	241,853
	Percent			58%	35%	7%	0%	100%
	Per Unit		30.6	\$736.07	\$443.70	\$86.47	\$0.00	\$1,266.25
	Labor Rate	\$24.09						
Year 2002	Leak Repair Main	348	6,951.9	195,951	149,215	44,316	(6,313)	383,169
	Percent			51%	39%	12%	-2%	100%
	Per Unit		20.0	\$563.08	\$428.78	\$127.34	(\$18.14)	\$1,101.06
	Labor Rate	\$28.19						
Year 2003	Leak Repair Main	390	5,472.9	157,286	120,438	25,652	323	303,699
	Percent			52%	40%	8%	0%	100%
	Per Unit		14.0	\$403.30	\$308.82	\$65.77	\$0.83	\$778.72
	Labor Rate	\$28.74						
Year 2004	Leak Repair Main	420	7,878.3	236,157	156,895	38,644	(1,760)	429,936
	Percent			55%	36%	9%	0%	100%
	Per Unit		18.8	\$562.28	\$373.56	\$92.01	(\$4.19)	\$1,023.66
	Labor Rate	\$29.98						
<b>Total</b>		<b>2,066</b>	<b>41,157.2</b>	<b>1,296,766</b>	<b>959,406</b>	<b>168,642</b>	<b>(7,750)</b>	<b>2,417,064</b>
	Percent			54%	40%	7%	0%	100%
	Per Unit		19.9	\$627.67	\$464.38	\$81.63	(\$3.75)	\$1,169.92

**SPRINGFIELD**

**0102 LEAK REPAIR MAIN 1998 - 2004**

Location	Description	Volumes	Hours	Labor Purchases	Material	Other	Total	
Year 1998	Leak Repair Main	298	285.0	190,916	48,065	32,630		271,611
		Percent		70%	18%	12%	0%	100%
		Per Unit	1.0	\$640.66	\$161.29	\$109.50	\$0.00	\$911.45
	Labor Rate	\$669.88						
Year 1999	Leak Repair Main	368	11,022.0	257,134	74,582	26,659		358,375
		Percent		72%	21%	7%	0%	100%
		Per Unit	30.0	\$698.73	\$202.67	\$72.44	\$0.00	\$973.85
	Labor Rate	\$23.33						
Year 2000	Leak Repair Main	360	11,178.0	214,590	55,989	16,577		287,156
		Percent		75%	19%	6%	0%	100%
		Per Unit	31.1	\$596.08	\$155.53	\$46.05	\$0.00	\$797.66
	Labor Rate	\$19.20						
Year 2001	Leak Repair Main	327	9,683.2	252,295	69,162	20,244	-	341,701
		Percent		74%	20%	6%	0%	100%
		Per Unit	29.6	\$771.54	\$211.50	\$61.91	\$0.00	\$1,044.96
	Labor Rate	\$26.05						
Year 2002	Leak Repair Main	359	8,764.5	249,824	40,589	27,166	-	317,579
		Percent		79%	13%	9%	0%	100%
		Per Unit	24.4	\$695.89	\$113.06	\$75.67	\$0.00	\$884.62
	Labor Rate	\$28.50						
Year 2003	Leak Repair Main	356	9,377.9	291,876	66,392	29,260	-	387,528
		Percent		75%	17%	8%	0%	100%
		Per Unit	26.3	\$819.88	\$186.49	\$82.19	\$0.00	\$1,088.56
	Labor Rate	\$31.12						
Year 2004	Leak Repair Main	365	9,389.5	294,257	78,030	47,548	(2,927)	416,908
		Percent		71%	19%	11%	-1%	100%
		Per Unit	25.7	\$806.18	\$213.78	\$130.27	(\$8.02)	\$1,142.21
	Labor Rate	\$31.34						

<b>Total</b>	<b>2,433</b>	<b>59,700.1</b>	<b>1,750,892</b>	<b>432,809</b>	<b>200,084</b>	<b>(2,927)</b>	<b>2,380,858</b>
Percent			74%	18%	8%	0%	100%
Per Unit		24.5	\$719.64	\$177.89	\$82.24	(\$1.20)	\$978.57

MASSACHUSETTS  
CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
<b>GROWTH</b>													
New Mains Installed													
Units	336,777	317,934	299,272	340,506	239,119	268,427	236,039	183,258	164,610	168,113	140,347	119,082	134,812
Unit Cost	\$8.33	\$8.59	\$9.64	\$7.00	\$9.18	\$8.73	\$8.72	\$11.68	\$14.20	\$11.20	\$10.70	\$12.39	\$8.82
Dollars	2,805,807	2,731,582	2,885,560	2,384,950	2,194,988	2,343,336	2,057,421	2,140,369	2,336,767	1,883,209	1,502,270	1,475,846	1,188,853
New Residential Service													
Units	4,607	4,404	4,111	3,821	3,543	3,651	3,264	2,836	2,798	2,092	1,940	1,867	2,108
Unit Cost	\$995.86	\$834.51	\$788.58	\$803.30	\$916.42	\$916.97	\$1,016.24	\$1,072.83	\$1,268.82	\$1,358.17	\$1,634.51	\$1,582.17	\$1,464.21
Dollars	4,587,941	3,675,190	3,241,853	3,069,399	3,246,890	3,347,851	3,316,994	3,042,550	3,550,153	2,841,300	3,170,952	2,953,919	3,086,552
New C&I Service													
Units	474	553	463	733	360	619	594	514	546	448	475	437	357
Unit Cost	\$1,609.97	\$1,502.46	\$1,817.60	\$1,051.92	\$1,780.43	\$1,480.64	\$1,716.75	\$2,001.02	\$2,040.85	\$2,289.81	\$2,359.69	\$2,036.99	\$2,377.68
Dollars	763,127	830,860	841,547	771,058	640,954	916,518	1,019,750	1,028,525	1,114,303	1,025,837	1,120,854	890,166	848,831
New Residential Meters													
Units	5,199	3,545	3,447	3,391	2,971	4,458	3,846	4,050	4,419	3,320	3,383	3,277	3,894
Unit Cost	\$63.44	\$67.79	\$57.79	\$57.70	\$62.25	\$80.74	\$52.78	\$60.52	\$68.50	\$65.31	\$59.52	\$70.42	\$84.85
Dollars	329,838	240,305	199,202	195,657	184,931	359,935	203,004	245,115	302,713	216,830	201,342	230,761	330,417
New C&I Meters													
Units	723	663	685	609	459	693	653	538	366	305	291	296	233
Unit Cost	\$375.09	\$473.10	\$532.15	\$516.56	\$652.19	\$516.06	\$674.16	\$735.86	\$1,118.32	\$1,283.64	\$1,131.86	\$1,367.34	\$1,756.80
Dollars	271,191	313,667	364,526	314,582	299,355	357,629	440,228	395,894	409,305	391,509	329,371	404,734	409,335
Special Projects	0	0	0	0	4,680	234,931	0	0	1,369,545	1,401,571	260,667	92,550	89,833
<b>Total Growth</b>	<b>8,757,904</b>	<b>7,791,604</b>	<b>7,532,688</b>	<b>6,735,646</b>	<b>6,571,798</b>	<b>7,560,200</b>	<b>7,037,397</b>	<b>6,852,453</b>	<b>9,082,786</b>	<b>7,760,256</b>	<b>6,585,456</b>	<b>6,047,976</b>	<b>5,953,821</b>
<b>RENTALS</b>													
New Resid CB													
Units	2,372	1,432	972	625	976	773	575	439	606	104	49	34	42
Unit Cost	\$524.42	\$495.71	\$569.88	\$616.34	\$441.55	\$790.18	\$941.60	\$838.57	\$947.80	\$1,195.25	\$1,578.61	\$1,266.56	\$777.48
Dollars	1,243,929	709,861	553,926	385,215	430,956	610,813	541,420	368,133	574,366	124,306	77,352	43,063	32,654
New C&I CB													
Units	231	213	139	105	71	31	93	21	14	5	2	0	0
Unit Cost	\$939.60	\$1,429.04	\$2,256.65	\$3,124.77	\$1,510.66	\$1,864.65	\$2,509.51	\$1,496.05	\$3,680.86	\$6,928.00	\$28,692.00	\$2,266.56	\$8,328
Dollars	217,048	304,386	313,674	328,101	107,257	57,804	233,385	31,417	51,532	34,640	57,384	8,993	0
New Water Heaters													
Units	3,678	2,773	2,673	2,703	0	0	7	0	1,436	1,415	1,567	1,339	1,318
Unit Cost	\$272.64	\$299.49	\$314.46	\$312.88	\$312.88	\$314.46	\$32.00	\$400.26	\$406.91	\$476.07	\$2,549.60	\$600.73	\$719.30
Dollars	1,002,771	830,489	840,545	845,727	0	(106)	224	26,244	584,328	673,633	3,995,221	804,380	948,033
Replacement Water Heater													
Units	1,795	1,986	1,918	1,677	0	0	0	5,541	2,214	2,214	2,124	2,007	2,072
Unit Cost	\$292.01	\$287.79	\$325.16	\$393.97	\$393.97	\$325.16	\$447.42	\$400.26	\$428.22	\$502.51	\$447.42	\$521.26	\$489.76
Dollars	524,154	571,555	623,653	660,694	0	51	0	2,217,834	948,070	1,112,568	950,317	1,046,176	1,014,787
<b>Total Rentals</b>	<b>2,987,902</b>	<b>2,416,291</b>	<b>2,331,798</b>	<b>2,219,737</b>	<b>538,213</b>	<b>668,562</b>	<b>775,029</b>	<b>2,643,628</b>	<b>2,158,296</b>	<b>1,945,147</b>	<b>5,080,274</b>	<b>1,902,612</b>	<b>2,003,802</b>

MASSACHUSETTS  
MASSACHUSETTS  
CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
<b>METER WORK</b>													
Upgrade Meter Fits													
Units	1,584	1,367	1,526	2,071	1,783	1,405	1,636	1,733	1,620	2,071	1,778	2,228	2,105
Unit Cost	\$163.25	\$150.99	\$143.26	\$174.65	\$240.63	\$290.19	\$220.91	\$223.24	\$202.44	\$112.81	\$206.40	\$135.21	\$172.62
Dollars	258,586	206,399	218,619	361,703	429,040	407,720	361,406	386,874	327,959	233,621	366,984	301,246	363,362
Instrumentation													
Units	0	0	0	0	0	0	698	350	327	476	239	231	314
Unit Cost							\$293.07	\$76.87	\$85.97	\$39.33	\$23.89	\$55.24	\$166.70
Dollars	0	0	77,067	0	0	0	204,565	26,906	28,111	18,722	5,709	12,760	52,345
Relocate Meter Fits													
Units	374	333	394	296	246	336	164	403	361	374	353	165	664
Unit Cost	\$103.72	\$95.90	\$120.87	\$142.68	\$167.98	\$107.28	\$149.47	\$184.50	\$117.66	\$68.59	\$143.25	\$130.87	\$130.70
Dollars	38,791	31,934	47,623	42,234	41,323	36,045	24,513	74,352	42,476	25,653	50,566	21,594	86,784
Residential Meterscan													
Units	27,563	34,407	34,252	40,610	20,447	57,174	13,145	2,604	288	27	17	6	0
Unit Cost	\$86.77	\$73.81	\$80.76	\$71.22	\$135.99	\$134.78	\$242.24	\$111.68	\$145.56	\$285.04	\$114.12	\$459.83	\$659.00
Dollars	2,391,553	2,539,432	2,766,024	2,892,173	2,780,570	7,706,112	3,184,305	290,807	41,922	7,696	1,940	2,759	13,839
C&I Meterscan													
Units	1,805	1,356	2,176	1,746	1,750	4,998	2,466	1,606	260	36	9	13	21
Unit Cost	\$175.25	\$136.83	\$124.02	\$118.56	\$222.90	\$114.41	\$188.42	\$99.16	\$117.58	\$393.42	\$557.44	\$643.85	\$659.00
Dollars	316,324	185,535	269,804	206,999	407,575	571,803	464,654	159,246	30,571	14,103	5,017	8,370	13,839
<b>Total Meter Work</b>	<b>3,005,254</b>	<b>2,963,300</b>	<b>3,379,197</b>	<b>3,503,109</b>	<b>3,658,508</b>	<b>8,721,680</b>	<b>4,239,443</b>	<b>938,185</b>	<b>471,039</b>	<b>299,855</b>	<b>430,216</b>	<b>346,729</b>	<b>516,426</b>
<b>REPLACEMENTS</b>													
Replacement Mains													
Units	106,495	104,910	154,299	107,190	99,599	156,311	132,692	105,223	100,736	103,179	73,327	79,966	124,372
Unit Cost	\$29.90	\$31.49	\$31.26	\$37.78	\$44.06	\$37.63	\$40.06	\$58.23	\$46.86	\$39.24	\$44.13	\$50.95	\$72.26
Dollars	3,183,764	3,303,939	4,824,017	4,050,082	4,388,233	5,881,777	5,315,789	6,127,510	4,720,296	4,048,907	3,235,660	4,073,916	8,986,940
Replacement Resid Serv													
Units	1,890	1,533	1,464	1,300	1,368	1,885	1,792	1,723	2,398	1,948	1,740	1,678	2,169
Unit Cost	\$542.27	\$632.68	\$835.63	\$949.83	\$967.36	\$1,064.38	\$1,087.10	\$1,122.15	\$881.73	\$1,342.80	\$1,202.77	\$1,278.03	\$1,542.24
Dollars	1,024,889	969,899	1,223,369	1,234,779	1,323,342	2,006,361	1,948,091	1,933,466	2,114,381	2,615,776	2,092,812	2,144,528	3,345,128
Replacement C&I Serv													
Units	60	47	42	137	158	130	141	78	53	84	60	54	95
Unit Cost	\$1,529.65	\$2,810.70	\$1,052.83	\$1,591.30	\$1,606.95	\$1,648.98	\$1,508.01	\$1,953.14	\$1,768.51	\$2,143.92	\$2,028.08	\$2,161.37	\$2,518.27
Dollars	91,779	132,103	44,219	218,008	253,898	214,367	212,629	152,345	93,731	180,089	121,685	116,714	239,236
Uprate													
Units	9,487	7,251	5,611	155	2,908	1,923	176	45	0	7	0	0	0
Unit Cost	\$129.42	\$96.53	\$153.20	\$888.22	\$297.84	\$230.02	\$3,639.39	\$477.58	45,709	\$6,368.86	(80,462)	(654)	95,904
Dollars	1,227,851	699,961	859,601	137,674	866,111	442,321	640,532	21,491					
Joint Sealing													
Units	1,078	243	273	1,545	1,204	501	261	584	428	481	938	696	847
Unit Cost	\$297.41	\$503.68	\$557.76	\$342.10	\$452.25	\$497.97	\$1,088.83	\$553.61	\$831.19	\$779.58	\$527.67	\$868.57	\$1,003.47
Dollars	320,603	122,394	152,269	528,548	544,505	249,485	284,184	323,310	355,748	374,976	494,959	604,522	849,936
Keyholing													
Units	223	1,171	576	0	0	930	963	738	602	706	511	702	939
Unit Cost	\$273.09	\$335.76	\$330.06			\$389.71	\$468.61	\$613.44	\$601.34	\$572.37	\$380.90	\$323.33	\$461.54
Dollars	60,900	393,177	190,115	0	0	362,427	451,269	452,716	362,007	404,090	194,639	226,978	433,390
Cathodic Protection													
Units	991	998	851	624	336	500	364	326	927	109	0	171	825
Unit Cost	\$433.10	\$517.05	\$450.90	\$699.09	\$888.87	\$596.04	\$1,079.62	\$888.08	\$263.82	\$1,278.61	\$343.588	\$1,198.82	\$792.12
Dollars	429,203	516,020	383,716	436,231	298,659	298,021	392,981	289,515	244,559	139,369		204,999	653,499
Tie-Over													
Units	0	0	0	0	0	0	0	1,042	477	450	321	551	ag 16
Unit Cost								\$391.22	\$471.83	\$638.17	\$773.50	\$684.93	\$1,119.98
Dollars	0	0	0	0	0	0	531,657	407,653	225,065	287,176	248,293	377,399	686,210
Misc- Meter Barriers													
Units	396	324	214	372	373	442	41	508	325	322	266	225	232

MASSACHUSETTS

MASSACHUSETTS  
CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
Unit Cost Dollars	\$110.89 43,913	\$84.25 27,298	\$111.62 23,886	\$103.77 38,604	\$122.93 45,853	\$89.08 39,374	\$3,993.45 163,732	\$97.90 49,731	\$118.85 38,626	\$121.64 39,167	\$99.27 26,405	\$120.04 27,009	\$167.59 38,880
Special Projects	0	0	0	0	0	678,342	437,154	456,811	240,171	216,451	363,985	16,945	92,772
<b>Total Replacements</b>	<b>6,382,902</b>	<b>6,164,791</b>	<b>7,701,192</b>	<b>6,643,926</b>	<b>7,720,601</b>	<b>10,172,475</b>	<b>10,378,019</b>	<b>10,214,548</b>	<b>8,440,293</b>	<b>8,350,583</b>	<b>7,041,564</b>	<b>7,792,356</b>	<b>15,421,895</b>
<b>ENGINEERING &amp; FACILITIES</b>													
Regulators	286,824	426,541	247,749	746,097	242,345	351,413	152,097	361,262	133,949	1,057,762	674,521	1,192,612	808,676
Plant Work	0	0	0	59,409	825,561	304,506	462,264	468,549	31,556	342,119	167,313	354,764	452,377
Transportation	536,683	848,207	933,796	1,096,417	1,501,298	1,710,858	30,686	73,373	20,682	11,650	1,020	0	0
Meter Purchases	426,222	815,351	816,957	1,131,712	1,501,298	1,710,858	1,656,525	1,041,509	705,510	786,346	717,502	354,421	926,070
Small Projects	0	76,582	277,673	95,226	457,711	561,503	150,841	210,000	50,094	108,018	35,843	1,620	0
Special Projects	17,790,466	2,959,417	2,481,094	2,475,189	1,635,105	3,405,971	1,454,409	12,786,561	139,912	0	0	(680,000)	0
Meter Shop	29,055	27,873	0	0	0	0	33,620	274,927	49,442	11,227	1,797	0	3,029
<b>Total Other Operations</b>	<b>19,069,250</b>	<b>5,153,971</b>	<b>4,757,269</b>	<b>5,544,641</b>	<b>4,721,229</b>	<b>6,334,251</b>	<b>3,940,442</b>	<b>15,216,181</b>	<b>1,131,145</b>	<b>2,317,122</b>	<b>1,597,996</b>	<b>1,223,417</b>	<b>2,190,152</b>
<b>TECHNOLOGY</b>	<b>2,878,980</b>	<b>2,260,753</b>	<b>3,709,360</b>	<b>4,811,457</b>	<b>3,379,630</b>	<b>2,753,633</b>	<b>3,328,024</b>	<b>22,830,014</b>	<b>4,415,338</b>	<b>777,776</b>	<b>956,232</b>	<b>457,568</b>	<b>281,238</b>
<b>GENERAL CAPITAL</b>													
Office Equipment	204,011	69,768	55,738	301,058	141,335	38,856	132,345	176,235	42,898	19,687	17,871	12,085	41,970
Other Equipment	803,628	403,265	453,340	759,995	517,370	120,655	192,639	754,510	111,640	228,393	77,309	230,160	188,182
Small Projects	85,645	0	0	0	0	50,849	4,688	5,300	1,876	154,654	19,570	147,890	215,695
<b>Total General Capital</b>	<b>1,093,284</b>	<b>473,033</b>	<b>509,078</b>	<b>1,061,053</b>	<b>658,705</b>	<b>210,560</b>	<b>329,672</b>	<b>936,045</b>	<b>156,414</b>	<b>402,734</b>	<b>114,750</b>	<b>390,135</b>	<b>445,847</b>
Overheads	6,410,068	8,278,947	6,523,215	6,130,809	5,350,762	5,478,442	4,656,690	3,790,531	3,605,090	4,230,051	4,883,515	5,700,349	5,962,830
Indirects	2,639,323	2,824,127	3,967,645	3,923,317	3,499,984	4,286,322	4,280,068	4,251,277	4,276,172	4,262,303	3,482,840	3,759,829	4,169,069
Corporate Indirect Lab. Tr.	0	0	0	(90,750)	(73,900)	(46,962)	(67,868)	0	0	0	0	0	0
<b>Total Overhead</b>	<b>9,049,391</b>	<b>11,103,074</b>	<b>10,490,860</b>	<b>9,963,376</b>	<b>8,776,846</b>	<b>9,717,802</b>	<b>8,868,890</b>	<b>8,041,808</b>	<b>7,881,262</b>	<b>8,492,354</b>	<b>8,366,355</b>	<b>9,460,178</b>	<b>10,131,899</b>
Non-Utility Capital	94,583	175,563	435,108	(268,052)	(111,997)	(977,119)	(33,121)	0	0	0	0	0	0
<b>Total LDC Capital</b>	<b>53,319,450</b>	<b>38,502,380</b>	<b>40,846,550</b>	<b>40,214,893</b>	<b>35,913,533</b>	<b>45,161,844</b>	<b>38,863,794</b>	<b>67,672,862</b>	<b>33,736,573</b>	<b>30,345,871</b>	<b>30,172,843</b>	<b>27,620,971</b>	<b>36,945,080</b>
<b>Overhead %</b>	<b>49.0%</b>	<b>63.9%</b>	<b>55.6%</b>	<b>56.5%</b>	<b>48.1%</b>	<b>36.3%</b>	<b>39.8%</b>	<b>42.1%</b>	<b>43.3%</b>	<b>47.7%</b>	<b>56.1%</b>	<b>60.1%</b>	<b>43.8%</b>

**BROCKTON**  
**CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING**

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
<b>GROWTH</b>													
New Mains Installed													
Units	199,873	184,373	185,029	221,780	167,768	163,258	158,312	120,261	102,058	115,725	79,563	77,396	104,469
Unit Cost	\$6.25	\$7.93	\$10.86	\$6.32	\$7.40	\$8.15	\$7.53	\$8.97	\$14.15	\$10.51	\$7.98	\$10.36	\$7.25
Dollars	1,249,242	1,462,585	2,009,751	1,400,816	1,241,001	1,330,109	1,191,671	1,078,856	1,443,676	1,215,884	634,923	802,009	757,133
New Residential Service													
Units	2,742	2,738	2,500	2,460	2,182	2,325	2,128	1,714	1,606	1,268	1,081	1,078	1,302
Unit Cost	\$1,123.14	\$846.08	\$821.98	\$824.78	\$975.95	\$918.60	\$1,052.19	\$1,034.60	\$1,417.63	\$1,299.51	\$1,815.27	\$1,764.25	\$1,385.22
Dollars	3,079,660	2,316,559	2,054,951	2,028,968	2,129,515	2,135,742	2,239,064	1,773,304	2,276,716	1,647,785	1,962,309	1,901,859	1,803,561
New C&I Service													
Units	293	310	272	250	212	400	430	327	333	284	270	328	258
Unit Cost	\$1,600.54	\$1,575.42	\$1,805.52	\$1,805.43	\$2,005.85	\$1,288.98	\$1,464.44	\$1,586.87	\$1,892.05	\$1,992.69	\$2,281.02	\$1,760.13	\$1,785.87
Dollars	468,959	488,380	491,102	451,358	425,241	515,593	629,710	518,907	630,054	565,924	615,875	577,324	460,754
New Residential Meters													
Units	3,015	2,228	2,117	2,280	2,227	2,618	2,473	2,289	2,272	2,042	1,791	1,866	2,245
Unit Cost	\$81.46	\$59.19	\$44.17	\$37.77	\$41.88	\$46.41	\$47.86	\$35.86	\$56.47	\$58.86	\$50.03	\$58.53	\$62.46
Dollars	245,592	131,882	93,501	86,117	93,270	121,505	118,362	127,853	128,307	120,184	89,597	109,224	140,221
New C&I Meters													
Units	501	378	390	338	324	440	391	308	178	183	160	183	125
Unit Cost	\$424.76	\$580.26	\$711.42	\$625.50	\$634.96	\$520.98	\$613.29	\$863.89	\$1,244.09	\$1,268.41	\$1,208.14	\$1,450.14	\$2,400.58
Dollars	212,805	219,337	277,455	211,420	205,726	229,233	239,795	266,077	221,448	232,119	193,302	265,376	300,072
Special Projects									1,102,301	5,423	(1,902)	0	0
<b>Total Growth</b>	<b>5,256,258</b>	<b>4,618,743</b>	<b>4,926,760</b>	<b>4,178,679</b>	<b>4,094,753</b>	<b>4,332,182</b>	<b>4,418,602</b>	<b>3,764,997</b>	<b>5,802,502</b>	<b>3,787,319</b>	<b>3,494,104</b>	<b>3,655,792</b>	<b>3,461,741</b>
<b>RENTALS</b>													
New Resid CB													
Units	1,411	847	406	281	248	341	248	175	273	42	35	8	8
Unit Cost	\$529.73	\$482.54	\$505.62	\$588.25	\$713.27	\$652.01	\$954.66	\$621.13	\$749.94	\$866.55	\$1,148.89	\$4,490.88	\$3,183.88
Dollars	747,447	408,710	205,283	165,298	176,890	222,336	236,755	108,697	204,734	36,395	40,211	35,927	25,471
New C&I CB													
Units	151	168	93	89	50	16	9	1	0	2	0	0	0
Unit Cost	\$1,501.47	\$1,426.78	\$2,616.23	\$3,376.97	\$2,007.12	\$2,593.63	\$21,328.30	\$24,337.00	15,526	\$15,860.50			
Dollars	226,722	239,699	243,309	300,550	100,356	41,498	191,955	24,337		31,721			
New Water Heaters													
Units	1,809	1,464	1,240	1,361	0	0		0	583	540	612	506	551
Unit Cost	\$297.61	\$318.43	\$325.57	\$311.66					\$347.68	\$501.84	\$483.80	\$533.17	\$482.05
Dollars	538,385	466,176	403,701	424,163		(370)		181	202,695	270,996	296,086	269,785	265,609
Replacement Water Heater													
Units	723	816	938	1,013	0	0		5,541	1,134	1,097	1,099	1,052	1,035
Unit Cost	\$299.19	\$316.12	\$345.12	\$366.10				\$399.70	\$415.29	\$535.74	\$473.43	\$539.90	\$493.02
Dollars	216,315	257,956	323,725	370,860	0	24		2,214,748	470,936	587,706	520,301	567,970	510,275
<b>Total Rentals</b>	<b>1,728,869</b>	<b>1,372,541</b>	<b>1,176,018</b>	<b>1,260,871</b>	<b>277,246</b>	<b>263,488</b>	<b>428,710</b>	<b>2,347,963</b>	<b>893,891</b>	<b>926,818</b>	<b>893,326</b>	<b>881,084</b>	<b>803,023</b>

**BROCKTON**  
**CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING**

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
<b>METER WORK</b>													
Upgrade Meter Fits Units	232	213				366	317	278	263	370	313	437	607
Unit Cost	\$284.12	\$293.09				\$113.26	\$136.72	\$111.95	\$108.74	\$90.55	\$159.57	\$24.46	\$109.36
Dollars	65,916	62,429				41,452	43,339	31,122	28,598	33,505	49,946	10,690	66,384
Instrumentation Units						0	386	216	136	212	120	176	258
Unit Cost							\$29.88	\$65.66	\$71.91	\$41.42	\$31.28	\$13.11	\$65.88
Dollars						0	11,534	14,183	9,780	8,780	3,753	2,307	16,997
Relocate Meter Fits Units	275	183				132	126	37	106	166	203	60	45
Unit Cost	\$157.11	\$114.63				\$60.88	\$89.22	\$413.08	\$143.13	\$20.15	\$74.47	\$104.48	\$49.33
Dollars	43,204	20,978				8,036	11,242	15,284	15,172	3,345	15,118	6,269	2,220
Residential MISCAN Units	11,036	20,960				25,623	5,856	868	78	9	10	2	0
Unit Cost	\$107.88	\$69.13				\$138.26	\$260.94	\$155.18	\$118.41	\$86.11	\$24.10	\$41.50	\$279.06
Dollars	1,190,598	1,448,911				3,542,526	1,528,055	134,699	9,236	775	241	83	52
C&I MISCAN Units	372	827				2,528	1,055	414	77	28	7	13	18
Unit Cost	\$387.71	\$139.11				\$129.46	\$178.21	\$120.80	\$247.97	\$306.36	\$448.14	\$282.54	\$279.06
Dollars	144,228	115,043				327,273	188,009	50,011	19,094	8,578	3,137	3,673	5,023
<b>Total Meter Work</b>	<b>1,443,946</b>	<b>1,647,361</b>	<b>1,671,942</b>	<b>1,500,283</b>	<b>1,714,972</b>	<b>3,919,287</b>	<b>1,782,179</b>	<b>245,299</b>	<b>81,880</b>	<b>54,983</b>	<b>72,195</b>	<b>23,022</b>	<b>90,676</b>
<b>REPLACEMENTS</b>													
Replacement Mains Units	68,589	52,334				65,723	73,744	47,045	67,449	38,256	38,381	40,369	85,733
Unit Cost	\$35.15	\$39.63				\$41.00	\$35.70	\$77.63	\$40.66	\$46.35	\$39.48	\$46.24	\$68.07
Dollars	2,410,612	2,073,858				2,694,612	2,632,579	3,652,026	2,742,690	1,773,198	1,515,436	1,866,842	5,835,594
Replacement Resid Serv Units	1,062	647				718	630	631	1,303	785	690	729	853
Unit Cost	\$510.73	\$664.59				\$753.61	\$789.56	\$928.96	\$633.38	\$1,118.82	\$939.54	\$1,088.31	\$1,385.77
Dollars	542,392	429,992				541,095	497,420	586,172	825,292	878,276	648,286	793,376	1,182,061
Replacement C&I Serv Units	20	29				49	23	10	11	17	6	8	7
Unit Cost	\$983.80	\$2,097.97				\$1,514.24	\$1,148.08	\$2,412.80	\$3,982.73	\$1,385.94	\$2,991.00	\$1,461.25	\$3,433.29
Dollars	19,676	60,841				74,198	26,406	24,128	43,810	23,561	17,946	11,690	24,033
Uprate Units	9,487	7,251				0		45	0	0	0	0	0
Unit Cost	\$168.53	\$96.53						\$159.02					
Dollars	1,598,872	699,961				71	9,062	7,156	296	(114)	(1,769)	(654)	157
Joint Sealing Units	225	139				130	122	122	45	0	271	90	53
Unit Cost	\$386.80	\$536.74				\$445.45	\$766.48	\$766.48	\$227.62	\$439.14	\$439.14	\$1,303.28	\$796.55
Dollars	87,031	74,607				57,909	93,511	93,511	23,743	18,881	119,008	117,295	42,217
Keyholing Units						0		26	0	0	0	0	0
Unit Cost								\$2,187.81					
Dollars						1,167	2,418	56,883	0	11,840	416	0	0
Cathodic Protection Units	989	993				232	288	219	149	104	0	0	158
Unit Cost	\$486.83	\$496.05				\$694.39	\$532.69	\$720.12	\$1,097.33	\$947.04			\$3,149.24
Dollars	481,472	492,577				161,099	153,415	157,707	163,502	98,492	135,368	182,112	497,580
Tie-Over Units						0		646	241	223	164	354	354
Unit Cost								\$420.67	\$408.64	\$763.00	\$782.21	\$700.67	\$1,114.981
Dollars						0	191,911	271,754	98,482	170,149	128,283	248,037	506,906
Misc- Meter Barriers Units	258	209				336	15	211	236	257	186	183	156



**BROCKTON**  
**CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING**  
**BROCKTON**

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
Unit Cost Dollars	\$146.75	\$99.57	\$122.81	\$108.03	\$134.05	\$77.96	\$7,176.38	\$89,112	\$108.05	\$121.19	\$94.79	\$127.86	\$168.24
Special Projects	37,862	20,810	18,545	31,654	38,071	26,196	107,649	18,805	25,713	31,145	17,631	23,398	26,246
<b>Total Replacements</b>	<b>5,177,917</b>	<b>3,852,725</b>	<b>4,381,919</b>	<b>3,645,677</b>	<b>4,103,046</b>	<b>3,866,130</b>	<b>3,918,664</b>	<b>4,959,507</b>	<b>3,953,125</b>	<b>3,072,974</b>	<b>2,609,994</b>	<b>3,242,096</b>	<b>8,173,505</b>
<b>ENGINEERING &amp; FACILITIES</b>													
Regulators		150,961	8,857	437,444		41,020	14,587	11,042	47,046	715,615	72,229	559,482	381,392
Plant Work							165,249	209,760	6,700	27,341	47,299	59,311	283,689
Transportation	386,899	353,492	500,887	570,365	245,004	5,441		10,570	20,682	5,520	1,020	0	0
Meter Purchases	328,393	17,563	53,977	126,924	126,873	72,504	206,603	138,689	83,665	83,626	39,589	(47,852)	32,732
Small Projects				8,686	26,296	36,383		28,791	6,711	0	28,607	1,620	0
Special Projects	274,008	178,970	581,405	1,139,689	263,251		6,741	35,833	0	1,391	0	(680,000)	0
Meter Shop								0	34,996	0	325	0	3,029
<b>Total Other Operations</b>	<b>989,300</b>	<b>700,986</b>	<b>1,145,126</b>	<b>2,283,108</b>	<b>661,424</b>	<b>155,348</b>	<b>393,180</b>	<b>434,685</b>	<b>199,800</b>	<b>833,493</b>	<b>189,069</b>	<b>(107,439)</b>	<b>700,842</b>
<b>TECHNOLOGY</b>	<b>26,509</b>	<b>38,709</b>	<b>18,699</b>		<b>24,029</b>	<b>34,891</b>	<b>146,215</b>	<b>358,609</b>	<b>18,193</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>GENERAL CAPITAL</b>													
Office Equipment	10,239	1,146	16,687	85,871	42,524	1,200	5,120	37,882	12,884	70	12,489	8,493	31,651
Other Equipment	350,831	130,423	137,370	78,040	109,717	27,515	107,432	71,906	42,397	53,360	29,089	61,675	67,869
Small Projects								4,200	1,876	127,564	0	88,525	185,059
<b>Total General Capital</b>	<b>361,070</b>	<b>131,569</b>	<b>154,057</b>	<b>163,911</b>	<b>152,241</b>	<b>28,715</b>	<b>112,552</b>	<b>113,988</b>	<b>57,157</b>	<b>180,994</b>	<b>41,578</b>	<b>158,693</b>	<b>284,579</b>
Overheads	2,615,980	3,585,519	2,652,765	2,460,699	2,085,380	2,190,836	1,577,611	1,631,100	1,743,807	1,596,028	2,028,044	2,468,697	2,702,193
Indirects	1,561,100	1,530,188	1,799,241	1,749,586	1,546,894	1,791,923	1,729,260	1,624,550	1,684,534	<b>1,789,026</b>	<b>1,250,311</b>	<b>1,213,463</b>	<b>1,439,625</b>
Corporate Indirect Lab. Tr.				171,950	114,800	92,798	164,144			3,383,054	3,278,355	3,682,160	4,141,818
<b>Total Overhead</b>	<b>4,177,080</b>	<b>5,115,707</b>	<b>4,452,006</b>	<b>4,382,235</b>	<b>3,747,074</b>	<b>4,075,557</b>	<b>3,471,015</b>	<b>3,255,650</b>	<b>3,428,341</b>	<b>3,383,054</b>	<b>3,278,355</b>	<b>3,682,160</b>	<b>4,141,818</b>
Non-Utility Capital	94,583	175,563	430,470	669,938	612,209	169,945							
<b>Total IDC Capital</b>	<b>19,255,532</b>	<b>17,653,904</b>	<b>18,356,997</b>	<b>18,084,702</b>	<b>15,446,994</b>	<b>16,845,543</b>	<b>14,671,116</b>	<b>15,480,698</b>	<b>14,434,889</b>	<b>12,241,635</b>	<b>10,578,621</b>	<b>11,535,408</b>	<b>17,656,184</b>

LAWRENCE  
LAWRENCE  
CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
<b>GROWTH</b>													
New Mains Installed													
Units	22,134	23,219	23,978	23,206	12,180	35,232	23,582	14,434	19,231	18,072	17,751	10,659	9,162
Unit Cost	\$7.71	\$8.35	\$10.15	\$9.65	\$41.01	\$10.42	\$14.58	\$34.62	\$15.17	\$11.94	\$23.28	\$19.77	\$14.00
Dollars	170,550	193,969	243,453	223,866	499,521	367,200	343,743	499,745	291,827	215,734	413,185	210,767	128,301
New Residential Service													
Units	452	390	408	381	364	355	313	304	324	236	211	213	197
Unit Cost	\$817.09	\$733.10	\$818.28	\$1,012.57	\$988.99	\$910.30	\$973.96	\$1,134.82	\$1,359.56	\$1,282.25	\$1,476.84	\$1,357.75	\$1,815.30
Dollars	369,325	285,908	333,859	385,791	359,992	323,156	304,848	344,984	440,496	302,610	311,614	289,201	357,614
New C&I Service													
Units	23	29	32	29	33	42	41	47	91	49	91	28	25
Unit Cost	\$3,140.87	\$2,256.34	\$2,494.44	\$3,019.72	\$1,795.45	\$2,320.81	\$3,118.22	\$3,370.23	\$2,412.62	\$3,228.08	\$2,480.82	\$3,102.82	\$5,037.44
Dollars	72,240	65,434	79,822	87,572	59,250	97,474	127,847	158,401	219,548	158,176	225,755	86,879	125,936
New Residential Meters													
Units	451	487	419	347	304	401	396	643	878	418	595	511	607
Unit Cost	\$84.13	\$61.88	\$58.11	\$109.89	\$68.09	\$65.29	\$61.69	\$61.15	\$99.37	\$46.76	\$56.06	\$81.81	\$74.18
Dollars	37,943	30,134	24,349	38,131	20,698	26,181	24,429	39,318	87,249	19,545	33,356	41,807	45,025
New C&I Meters													
Units	75	93	95	150	75	65	75	62	31	29	32	30	24
Unit Cost	\$763.59	\$419.08	\$521.62	\$441.60	\$781.31	\$1,326.14	\$1,497.17	\$701.71	\$2,898.65	\$1,689.48	\$1,700.25	\$625.43	\$953.71
Dollars	57,269	38,974	49,554	66,240	58,598	86,199	112,288	43,506	89,858	48,995	54,408	18,763	22,889
Special Projects						234,931			267,244	541,489	18,126	0	89,833
<b>Total Growth</b>	<b>707,327</b>	<b>614,419</b>	<b>731,037</b>	<b>801,600</b>	<b>998,059</b>	<b>1,135,141</b>	<b>913,155</b>	<b>1,085,954</b>	<b>1,396,222</b>	<b>1,286,549</b>	<b>1,056,444</b>	<b>647,417</b>	<b>769,598</b>
<b>RENTALS</b>													
New Resid CB													
Units	199	146	182	70	11	88	99	94	102	19	1	8	8
Unit Cost	\$442.61	\$397.52	\$232.37	\$730.37	\$4,912.18	\$983.76	\$608.51	\$729.40	\$975.88	\$1,393.37	\$4,182.00	\$170.13	\$45.88
Dollars	88,079	58,038	42,291	51,126	54,034	86,571	60,242	68,564	99,540	26,474	4,182	1,361	367
New C&I CB													
Units	18	34	28	10	1	0	67	13	1	0	1	0	0
Unit Cost	\$232.11	\$1,587.26	\$1,856.68	\$2,035.20	\$1,096.00		\$44.84	\$297.92	\$2,137.00		\$4,548.00		
Dollars	4,178	53,967	51,987	20,352	1,096	6,733	3,004	3,873	2,137	402	4,548	118	59
New Water Heaters													
Units	518	393	409	425		0	0	0	228	197	232	172	147
Unit Cost	\$261.59	\$246.48	\$318.39	\$332.28					\$398.25	\$433.96	\$448.48	\$467.84	\$521.31
Dollars	135,506	96,866	130,220	141,217		27	147	163	90,802	85,490	104,047	80,469	76,633
Replacement Water Heater													
Units	220	202	220	193		0	0	0	283	266	259	251	230
Unit Cost	\$306.51	\$249.05	\$295.68	\$321.46					\$471.74	\$456.08	\$467.51	\$494.52	\$526.68
Dollars	67,433	50,309	65,050	62,042		0	0	3,086	133,503	121,317	121,084	124,124	121,137
<b>Total Rentals</b>	<b>295,196</b>	<b>259,180</b>	<b>289,548</b>	<b>274,737</b>	<b>55,130</b>	<b>93,331</b>	<b>63,393</b>	<b>75,686</b>	<b>325,982</b>	<b>233,683</b>	<b>233,861</b>	<b>206,072</b>	<b>198,196</b>

**LAWRENCE**  
**CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING**

METER WORK													
	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
Upgrade Meter Fits													
Units	569	756	704	937	723	883	986	1,288	863	1,296	1,027	1,087	546
Unit Cost	\$219.48	\$142.33	\$140.55	\$160.09	\$208.06	\$196.09	\$200.16	\$150.39	\$166.91	\$64.76	\$197.36	\$162.78	\$298.05
Dollars	124,883	107,605	98,944	150,008	150,430	173,145	197,357	193,701	144,044	83,924	202,690	176,940	162,736
Instrumentation													
Units				0	0	0	127	76	22	21	4	15	16
Unit Cost								\$15.71	\$18.55	\$6.71	\$249.50	\$172.93	\$1,894.38
Dollars				0	0	0	0	1,194	408	141	998	2,594	30,310
Relocate Meter Fits													
Units	85	135	164	79	85	171	1	92	84	51	60	10	93
Unit Cost	\$119.87	\$57.71	\$102.36	\$181.56	\$170.07	\$142.35	\$8,236.00	\$129.62	\$102.29	(\$6.69)	\$164.42	\$110.20	\$99.17
Dollars	10,189	7,791	16,787	14,343	14,456	24,342	8,236	11,925	8,592	(341)	9,805	1,102	9,223
Residential MISC													
Units	4,254	6,018	4,116	4,404	3,036	8,353	3,214	1,115	152	0	5	1	0
Unit Cost	\$69.40	\$62.33	\$69.69	\$83.44	\$153.97	\$124.57	\$151.21	\$67.47	\$158.38		\$63.20	\$1,272.00	
Dollars	295,243	375,112	286,849	367,452	467,439	1,040,518	486,000	75,231	24,074	5,593	316	1,272	44
C&I MISC													
Units	204	104	168	124	157	273	151	65	0	0	1	0	1
Unit Cost	\$158.90	\$233.89	\$252.14	\$258.63	\$166.38	\$222.16	\$203.81	\$160.49			\$550.00		\$8,701.00
Dollars	32,415	24,325	42,359	32,070	26,122	60,649	30,775	10,432	4,173	4,779	550	4,619	8,701
Total Meter Work	462,730	514,833	444,939	563,873	658,447	1,298,654	722,368	292,483	181,291	94,096	214,419	186,527	211,014
REPLACEMENTS													
Replacement Mains													
Units	5,760	12,387	19,311	17,075	5,213	34,468	26,916	11,495	12,703	13,725	12,776	9,864	21,684
Unit Cost	\$44.08	\$33.74	\$45.94	\$18.71	\$105.97	\$54.98	\$50.55	\$85.23	\$62.85	\$37.51	\$47.01	\$71.55	\$56.93
Dollars	253,875	417,938	887,112	319,413	552,406	1,895,187	1,360,489	979,730	798,387	514,776	600,565	705,784	1,234,381
Replacement Resid Serv													
Units	187	214	322	310	228	504	500	319	331	495	345	343	418
Unit Cost	\$993.91	\$952.17	\$1,150.84	\$1,074.95	\$1,174.13	\$1,593.94	\$1,451.19	\$1,647.63	\$1,416.75	\$1,701.06	\$1,608.38	\$1,573.99	\$1,975.53
Dollars	185,861	203,764	370,569	333,234	267,702	803,345	725,595	525,594	468,943	842,027	554,890	539,880	825,773
Replacement C&I Serv													
Units	17	11	10	21	16	32	36	1	8	18	4	15	20
Unit Cost	\$2,185.82	\$4,799.00	(\$423.20)	\$2,245.57	\$3,578.38	\$1,851.25	\$1,476.00	\$25,309.00	\$3,581.00	\$3,657.50	(\$4,136.00)	\$2,765.60	\$3,534.40
Dollars	37,159	52,789	(4,232)	47,157	57,254	59,240	53,136	25,309	28,648	65,835	(16,544)	41,484	70,688
Uprate													
Units					2,908	1,923	176	0	0	0	0	0	0
Unit Cost					\$279.77	\$229.98	\$3,587.90						
Dollars	425			111,799	813,572	442,250	631,470	14,335	45,413	8,139	1,348	0	0
Joint Sealing													
Units	282	70	18	229	377	154	0	315	156	283	170	167	190
Unit Cost	\$360.20	\$564.70	\$569.78	\$568.02	\$511.14	\$511.37		\$496.46	\$995.98	\$701.95	\$466.31	\$607.94	\$784.06
Dollars	101,576	39,529	10,256	130,076	192,701	78,751	93,711	156,386	155,373	198,652	79,273	101,526	148,972
Keyholing													
Units		125	102	0	0	220	675	78	312	373	70	129	152
Unit Cost		\$358.02	\$594.09			\$470.11	\$389.09	\$2,218.49	\$620.14	\$710.19	\$440.16	\$493.35	\$644.95
Dollars		44,753	60,597	0	0	103,425	262,636	173,042	193,484	264,902	30,811	63,642	\$98,032
Cathodic Protection													
Units		4	1		6	0	0	3	0	0	0	23	313
Unit Cost		\$5,871.25	\$249.00		\$411.00			\$8,047.33				\$40.04	\$245.18
Dollars	1,041	23,485	249	1,664	2,466	3,782	5,251	24,142	1,789	27,023	100,459	921	76,240
Tie-Over													
Units				0	0	0	0	138	66	61	65	64	887
Unit Cost								\$439.30	\$670.52	\$675.90	\$751.20	\$846.69	\$991.58
Dollars				0	0	0	105,396	60,624	44,254	41,230	48,828	54,188	86,463
Misc- Meter Barriers													
Units	100	61	18	9	16	12	0	123	10	22	17	11	18

LAWRENCE

LAWRENCE  
CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
Unit Cost Dollars	\$77.04 7,704	\$43.07 2,627	\$50.17 903	\$164.44 1,480	\$130.63 2,090	\$72.17 866	4,050	\$87.15 10,720	\$99.10 991	\$84.55 1,860	\$146.41 2,489	\$59.82 658	\$76.61 1,379
Special Projects						194,330	23,032	0	210,574	125,934	308,130	13,945	2,563
<b>Total Replacements</b>	<b>587,641</b>	<b>784,885</b>	<b>1,325,454</b>	<b>944,823</b>	<b>1,888,191</b>	<b>3,581,176</b>	<b>3,264,766</b>	<b>1,969,882</b>	<b>1,947,856</b>	<b>2,090,378</b>	<b>1,710,249</b>	<b>1,522,028</b>	<b>2,544,691</b>
<b>ENGINEERING &amp; FACILITIES</b>													
Regulators		44,790	74,534	33,673	12,226	111,720	114,022	270,596	73,222	20,397	179,870	29,099	139,067
Plant Work							69,052	45,395	26,700	1,458	0	3,146	0
Transportation	2,215	59,743	84,898	59,318	155,949		2,390	5,183	0				
Meter Purchases	30,879	(1,809)	8,314	29,793	30,281	50,488	95,458	267,857	24,093	13,248	115	7,279	1,177
Small Projects		14,292	168,962	59,428	62,781	83,725	28,819	486	30,596	73,085	6,050	0	0
Special Projects			29	201,220	221,802			99,604	139,912	0	0	0	0
Meter Shop								0	0				
<b>Total Other Operations</b>	<b>33,094</b>	<b>117,016</b>	<b>336,737</b>	<b>383,432</b>	<b>483,039</b>	<b>245,933</b>	<b>309,741</b>	<b>689,121</b>	<b>294,523</b>	<b>108,188</b>	<b>186,035</b>	<b>39,524</b>	<b>140,244</b>
<b>TECHNOLOGY</b>		48,627	6,539	1,292	6,991	3,642	30,152	10,207	12,447	2,678	0	0	0
<b>GENERAL CAPITAL</b>													
Office Equipment	23,026	2,046	0	543	6,090	27,519	6,471	4,736	6,697	0	0	0	0
Other Equipment	198,361	124,377	40,041	100,532	81,047	8,388	26,978	33,100	28,258	95,690	21,483	40,511	18,525
Small Projects						22,223	3,748	0	0	27,090	0	25,986	0
<b>Total General Capital</b>	<b>221,387</b>	<b>126,423</b>	<b>40,041</b>	<b>101,075</b>	<b>87,137</b>	<b>58,130</b>	<b>37,197</b>	<b>37,836</b>	<b>34,955</b>	<b>122,780</b>	<b>21,483</b>	<b>66,497</b>	<b>18,525</b>
Overheads	382,925	427,131	711,632	561,852	584,590	676,305	534,130	769,300	463,432	442,673	711,924	874,791	828,637
Indirects	284,962	393,287	411,513	462,705	417,723	499,983	451,713	435,928	516,187	<b>545,169</b>	<b>492,099</b>	<b>366,957</b>	<b>310,636</b>
Corporate Indirect Lab. Tr.				50,100	35,000	29,250	63,778						
<b>Total Overhead</b>	<b>667,887</b>	<b>820,418</b>	<b>1,123,145</b>	<b>1,074,657</b>	<b>1,037,313</b>	<b>1,205,538</b>	<b>1,049,621</b>	<b>1,205,228</b>	<b>979,619</b>	<b>987,842</b>	<b>1,204,023</b>	<b>1,241,748</b>	<b>1,139,273</b>
Non-Utility Capital				117,493	230,879	94,145							
<b>Total LDC Capital</b>	<b>2,975,262</b>	<b>3,285,801</b>	<b>4,297,440</b>	<b>4,262,982</b>	<b>5,445,186</b>	<b>7,715,690</b>	<b>6,390,393</b>	<b>5,366,397</b>	<b>5,172,895</b>	<b>4,926,194</b>	<b>4,626,514</b>	<b>3,909,813</b>	<b>5,021,541</b>

SPRINGFIELD  
SPRINGFIELD  
CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
<b>GROWTH</b>													
New Mains Installed													
Units	114,770	110,342		95,520	59,171	69,937	54,145	48,563	43,321	34,316	43,033	31,027	21,181
Unit Cost	\$12.50	\$9.74		\$7.96	\$7.68	\$9.24	\$9.64	\$11.57	\$13.88	\$13.16	\$10.55	\$14.92	\$14.33
Dollars	1,434,235	1,075,028		760,268	454,466	646,027	522,007	561,768	601,264	451,591	454,162	463,070	303,419
New Residential Service													
Units	1,413	1,276	1,203	980	997	971	823	818	868	588	648	576	609
Unit Cost	\$919.51	\$840.69	\$709.10	\$668.00	\$759.66	\$915.50	\$939.35	\$1,129.90	\$959.61	\$1,515.14	\$1,384.30	\$1,324.41	\$1,519.50
Dollars	1,299,268	1,072,723	853,043	654,640	757,383	888,953	773,082	924,262	832,941	890,905	897,029	762,859	925,377
New C&I Service													
Units	158	214	159	454	115	177	123	140	122	115	114	81	74
Unit Cost	\$1,564.88	\$1,294.61	\$1,702.03	\$511.30	\$1,360.55	\$1,714.41	\$2,131.65	\$2,508.69	\$2,169.68	\$2,623.80	\$2,449.33	\$2,789.67	\$3,542.45
Dollars	247,251	277,046	270,623	232,128	156,463	303,451	262,193	351,217	264,701	301,737	279,224	225,963	262,141
New Residential Meters													
Units	1,733	830	911	764	440	1,439	977	1,118	1,269	860	997	900	1,042
Unit Cost	\$76.27	\$94.32	\$89.30	\$93.47	\$161.28	\$147.50	\$61.63	\$69.72	\$68.68	\$89.65	\$78.62	\$88.59	\$139.32
Dollars	132,180	78,289	81,352	71,409	70,963	212,249	60,213	77,944	87,157	77,101	78,389	79,730	145,171
New C&I Meters													
Units	147	192	200	121	60	188	187	168	157	93	99	83	84
Unit Cost	\$204.06	\$288.31	\$187.59	\$305.14	\$583.85	\$224.45	\$471.36	\$513.76	\$624.20	\$1,187.04	\$824.86	\$1,452.95	\$1,028.26
Dollars	29,997	55,356	37,517	36,922	35,031	42,197	88,145	86,311	97,999	110,395	81,661	120,595	86,374
Special Projects													
					4,680				0	854,659	244,443	92,550	0
<b>Total Growth</b>	<b>3,142,931</b>	<b>2,558,442</b>	<b>1,874,891</b>	<b>1,755,367</b>	<b>1,478,986</b>	<b>2,092,877</b>	<b>1,705,640</b>	<b>2,001,502</b>	<b>1,884,062</b>	<b>2,686,388</b>	<b>2,034,908</b>	<b>1,744,767</b>	<b>1,722,482</b>
<b>RENTALS</b>													
New Resid CB													
Units	762	439	384	274	717	344	228	170	231	43	13	18	26
Unit Cost	\$666.08	\$553.79	\$797.79	\$616.03	\$278.98	\$877.63	\$1,072.03	\$1,122.78	\$1,169.23	\$1,428.77	\$2,535.31	\$320.83	\$262.15
Dollars	507,556	243,113	306,352	168,791	200,032	301,906	244,423	190,872	270,092	61,437	32,959	5,775	6,816
New C&I CB													
Units	62	11	18	6	20	15	17	7	13	3	1	0	0
Unit Cost	\$163.53	\$974.55	\$1,021.00	\$1,199.83	\$290.25	\$638.20	\$2,260.35	\$458.14	\$2,605.31	\$839.00	\$16,108.00	0	0
Dollars	10,139	10,720	18,378	7,199	5,805	9,573	38,426	3,207	33,869	2,517	16,108	1,473	6,601
New Water Heaters													
Units	1,351	916	1,024	917		0	7	0	625	678	723	661	620
Unit Cost	\$290.81	\$291.97	\$299.44	\$305.72			\$11.00		\$465.33	\$467.77	\$456.02	\$489.48	\$493.12
Dollars	392,886	267,447	306,624	280,347		237	77	0	290,831	317,147	329,702	323,545	305,734
Replacement Water Heater													
Units	852	968	760	471		0	0	0	797	851	766	704	807
Unit Cost	\$301.49	\$271.99	\$309.05	\$483.63					\$431.16	\$474.20	\$403.31	\$502.96	\$475.06
Dollars	256,868	263,290	234,878	227,792		27	0	0	343,631	403,545	308,932	354,082	383,375
<b>Total Rentals</b>	<b>1,167,449</b>	<b>784,570</b>	<b>866,232</b>	<b>684,129</b>	<b>205,837</b>	<b>311,743</b>	<b>282,926</b>	<b>194,079</b>	<b>938,423</b>	<b>784,646</b>	<b>687,701</b>	<b>684,875</b>	<b>702,526</b>

SPRINGFIELD  
SPRINGFIELD  
CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
<b>METER WORK</b>													
Upgrade Meter Fits													
Units	783	398	514	564	506	156	333	167	494	405	438	704	952
Unit Cost	\$102.63	\$91.37	\$134.44	\$280.88	\$460.35	\$1,237.97	\$362.49	\$970.37	\$314.41	\$286.89	\$261.07	\$161.39	\$141.01
Dollars	80,361	36,365	69,104	158,416	232,937	193,123	120,710	162,051	155,317	116,192	114,348	113,616	134,242
Instrumentation													
Units				0	0	0	185	58	169	243	115	40	40
Unit Cost							\$1,043.41	\$198.78	\$106.05	\$40.33	\$8.33	\$196.48	\$125.95
Dollars			77,067	0	0	0	193,031	11,529	17,923	9,801	958	7,859	5,038
Relocate Meter Fits													
Units	14	15	127	94	29	33	37	274	171	157	90	95	526
Unit Cost	\$87.50	\$211.00	\$183.01	\$158.99	\$256.24	\$111.12	\$136.08	\$172.05	\$109.43	\$144.26	\$284.26	\$149.72	\$143.23
Dollars	1,225	3,165	23,242	14,945	7,431	3,667	5,035	47,143	18,712	22,649	25,583	14,223	75,341
Residential Metican													
Units	12,273	7,429	11,811	21,955	5,582	23,198	4,075	621	58	18	2	3	0
Unit Cost	\$75.42	\$75.83	\$74.67	\$47.77	\$142.88	\$134.63	\$287.18	\$130.24	\$148.48	\$73.78	\$691.50	\$468.00	\$57.50
Dollars	925,619	563,328	881,875	1,048,898	797,556	3,123,068	1,170,250	80,877	8,612	1,328	1,383	1,404	0
C&I Metican													
Units	1,229	425	511	427	455	2,197	1,260	1,127	183	8	1	0	2
Unit Cost	\$140.70	\$108.63	\$170.23	\$109.04	\$154.68	\$83.70	\$195.13	\$87.67	\$39.91	\$100.75	\$1,330.00	\$1,330.00	\$57.50
Dollars	172,921	46,167	86,990	46,558	70,379	183,881	245,870	98,803	7,304	806	1,330	78	115
<b>Total Meter Work</b>	<b>1,180,126</b>	<b>649,025</b>	<b>1,138,278</b>	<b>1,268,817</b>	<b>1,108,303</b>	<b>3,503,739</b>	<b>1,734,896</b>	<b>400,403</b>	<b>207,868</b>	<b>150,776</b>	<b>143,602</b>	<b>137,180</b>	<b>214,736</b>
<b>REPLACEMENTS</b>													
Replacement Mains													
Units	32,146	40,189	62,097	30,850	27,115	56,120	32,032	46,683	20,584	51,198	22,170	29,733	16,955
Unit Cost	\$21.60	\$20.21	\$19.03	\$33.95	\$28.04	\$23.02	\$41.29	\$32.04	\$57.29	\$34.39	\$50.50	\$50.49	\$113.06
Dollars	694,247	812,143	1,181,970	1,047,278	760,226	1,291,978	1,322,721	1,495,754	1,179,219	1,760,933	1,119,659	1,501,290	1,916,965
Replacement Resid Serv													
Units	641	672	805	638	558	663	662	773	764	668	705	606	898
Unit Cost	\$630.71	\$500.21	\$768.83	\$933.94	\$891.90	\$998.37	\$1,095.28	\$1,063.00	\$1,073.49	\$1,340.53	\$1,261.90	\$1,338.73	\$1,489.19
Dollars	404,287	336,143	618,908	595,856	497,681	661,921	725,076	821,700	820,146	895,473	889,636	811,272	1,337,294
Replacement C&I Serv													
Units	23	7	16	84	86	49	82	67	34	49	50	31	68
Unit Cost	\$1,739.09	\$2,639.00	\$797.44	\$1,409.44	\$1,440.01	\$1,651.61	\$1,623.01	\$1,555.94	\$625.68	\$1,850.88	\$2,405.66	\$2,049.68	\$2,125.22
Dollars	39,999	18,473	12,759	118,393	123,841	80,929	133,087	102,908	21,273	90,693	120,283	63,540	144,515
Uprate													
Units				0	0	0	0	0	0	7	0	0	0
Unit Cost										\$5,222.43			
Dollars			0	0	0	0	0	0	0	36,557	(80,041)	0	95,747
Joint Sealing													
Units	571	34	90	1,067	702	217	261	147	227	198	497	439	604
Unit Cost	\$278.30	\$242.88	\$510.44	\$268.30	\$384.41	\$519.93	\$616.22	\$499.41	\$778.11	\$795.17	\$596.94	\$878.59	\$1,090.64
Dollars	158,909	8,258	45,940	286,276	269,855	112,825	160,834	73,413	176,632	157,443	296,678	385,701	658,747
Keyholing													
Units	223	1,046	474	0	0	710	288	634	290	333	441	573	787
Unit Cost	\$267.93	\$333.03	\$273.24			\$363.15	\$646.58	\$351.41	\$581.11	\$382.43	\$370.55	\$285.05	\$426.12
Dollars	59,749	348,345	129,518	0	0	257,835	186,215	222,791	168,523	127,348	163,412	163,336	335,358
Cathodic Protection													
Units	2	1	1	7	7	268	76	104	778	5	0	148	354
Unit Cost	\$14,557.50	(\$42.00)	\$286.00	\$1,724.14	\$1,724.14	\$496.79	\$3,083.09	\$1,035.25	\$101.89	\$2,770.80	107.761	\$148.42	\$223.67
Dollars	29,115	(42)	286	153	12,069	133,140	234,315	107,666	79,268	13,854	79,268	21,966	79,268
Tie-Over													
Units				0	0	0	0	258	170	166	92	133	36
Unit Cost								\$291.76	\$484.29	\$456.61	\$773.72	\$565.22	\$1,085.36
Dollars				0	0	0	0	75,275	82,329	75,797	71,182	75,174	93,541
Misc- Meter Barriers													
Units	38	54	45	70	73	94	26	174	79	43	63	31	58

SPRINGFIELD  
CALENDAR YEARS 1992 TO 2004 HISTORY OF ACTUAL CAPITAL SPENDING

	Sept 1992 FYE Actual	Sept 1993 FYE Actual	Sept 1994 FYE Actual	Sept 1995 FYE Actual	Sept 1996 FYE Actual	Sept 1997 FYE Actual	Sept 1998 FYE Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual
Unit Cost Dollars	\$153.08 5,817	\$71.50 3,861	\$98.62 4,438	\$78.14 5,470	\$77.97 5,692	\$130.98 12,312	\$2,001.27 52,033	\$116.13 20,206	\$150.91 11,922	\$143.30 6,162	\$99.76 6,285	\$95.26 2,953	\$194.05 11,255
Special Projects						174,229	145,958	365,446	0	22,971	26,466	3,000	14,169
<b>Total Replacements</b>	<b>1,392,468</b>	<b>1,527,181</b>	<b>1,993,819</b>	<b>2,053,426</b>	<b>1,669,364</b>	<b>2,725,169</b>	<b>3,194,589</b>	<b>3,285,159</b>	<b>2,539,312</b>	<b>3,187,231</b>	<b>2,721,321</b>	<b>3,028,232</b>	<b>4,086,570</b>
<b>ENGINEERING &amp; FACILITIES</b>													
Regulators		230,790	164,358	214,719	230,119	197,034	23,488	79,624	13,681	321,750	422,422	604,031	288,217
Plant Work							202,382	213,394	(1,844)	313,320	117,262	292,307	168,688
Transportation	130,705	445,167	235,210	461,484	424,408	32,315	9,396	216	0	6,130	0	0	0
Meter Purchases	66,930	799,597	754,666	974,995	1,344,144	1,587,866	1,354,464	634,963	584,028	689,472	677,798	394,994	892,161
Small Projects		4,880	27,104	27,009	200,076	186,049	73,242	20,311	57,662	34,933	1,186	0	0
Special Projects	17,642,206	1,800,611	774,949	190,756	7,740	372		151,124	0	0	0	0	0
Meter Shop	49,047	27,873					33,620	274,927	14,446	9,836	1,472	0	0
<b>Total Other Operations</b>	<b>17,888,888</b>	<b>3,308,918</b>	<b>1,956,287</b>	<b>1,868,963</b>	<b>2,206,487</b>	<b>2,003,636</b>	<b>1,696,592</b>	<b>1,374,559</b>	<b>667,973</b>	<b>1,375,441</b>	<b>1,220,140</b>	<b>1,291,332</b>	<b>1,349,066</b>
<b>TECHNOLOGY</b>	<b>150,778</b>	<b>111,904</b>	<b>23,384</b>	<b>8,021</b>	<b>746</b>	<b>164,097</b>	<b>641,349</b>	<b>186,098</b>	<b>88,624</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>GENERAL CAPITAL</b>													
Office Equipment	44,531	27,007	11,406	169,438	46,851		77,427	25,644	1,964	17,472	0	3,592	0
Other Equipment	253,971	132,842	275,929	577,902	282,580	80,799	43,242	645,146	40,625	79,343	26,737	127,974	96,728
Small Projects	98,461					14,833		1,100	0	0	0	0	13,377
<b>Total General Capital</b>	<b>396,963</b>	<b>159,849</b>	<b>287,335</b>	<b>747,360</b>	<b>329,431</b>	<b>95,632</b>	<b>120,669</b>	<b>671,890</b>	<b>42,589</b>	<b>96,815</b>	<b>26,737</b>	<b>131,566</b>	<b>110,105</b>
Overheads	3,315,772	3,286,065	2,802,339	2,257,241	1,481,640	2,098,672	2,135,045	1,631,231	1,393,707	1,498,830	2,060,167	2,356,861	2,432,000
Indirects	793,261	900,652	1,210,472	1,269,352	1,125,187	1,575,964	1,584,051	1,702,085	1,786,711	<b>1,619,930</b>	<b>1,195,323</b>	<b>1,153,484</b>	<b>1,289,519</b>
Corporate Indirect Lab. Tr.				129,200	86,300	70,990	154,522						
<b>Total Overhead</b>	<b>4,109,033</b>	<b>4,186,717</b>	<b>4,012,811</b>	<b>3,655,793</b>	<b>2,693,127</b>	<b>3,745,626</b>	<b>3,873,618</b>	<b>3,333,316</b>	<b>3,180,418</b>	<b>3,118,760</b>	<b>3,255,490</b>	<b>3,510,345</b>	<b>3,721,519</b>
Non-Utility Capital			4,638	27,517	137,111	(8,098)							
<b>Total LDC Capital</b>	<b>29,428,636</b>	<b>13,286,606</b>	<b>12,157,675</b>	<b>12,069,393</b>	<b>9,829,392</b>	<b>14,634,421</b>	<b>13,250,279</b>	<b>11,447,006</b>	<b>9,549,269</b>	<b>11,400,057</b>	<b>10,089,899</b>	<b>10,528,297</b>	<b>12,507,004</b>

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE  
FIRST SET OF INFORMATION REQUESTS FROM LOCAL UWUA 273  
D. T. E. 05-27

Date: July 9, 2005

Responsible: Danny G. Cote, General Manager

UWUA-1-16 For the period January 1, 1998 to present, please list the location of each operations and maintenance facility that the company maintains (or maintained) in Massachusetts, including the number of employees (FTEs) at each such location and the functions they perform. To the extent the locations or staffing levels at any location have changed, please list all such changes. Also include a general description of the types of materials and supplies routinely stored and available on site at these maintenance facilities.

Response: See the attached UWUA-1-16 (a) for the following:

Part 1: List of locations of each operation and maintenance facility in Massachusetts.

Part 2: Number of current employees at each facility and the functions performed.

Part 3: Staffing level changes – see the Company's response to UWUA 1-1 (A). Staffing levels by O&M facility location are not available. The Company only tracks this information by division (e.g., Brockton, Lawrence and Springfield).

Part 4: General description of types of materials and supplies stored on site.



**Bay State Gas Company  
O&M Facility Locations  
Functions and Inventory**

Part 1		Part 2		Part 3	Part 4
Status	Location	Current # Employees	Functions Performed	Staffing Level Changes	Types of Materials and supplies routinely and available on site
Open	Brockton MA Op Ctr 995 Belmont Street Brockton MA	223	Billing, Service, Distribution, Engineering and construction, collections, facilities, fleet, communications, GIS, operational support services, logistics, meter reading, sales, scheduling, stores	See UWUA 1-1 (A)	Materials and supplies stored at the Brockton, Springfield and Lawrence Divisions include: Water heaters, boilers and furnaces. Gas Meters - all types, heating system and water heater repair parts, plastic and steel pipe fittings for maintenance and installation of gas distribution system, general supplies, ie, tape, rages, etc., tools and equipment safety materials. General facility maintenance material, i.e., paper towels, soap, etc.
Open	Springfield MA-Op Ctr 2025 Rossevelt Ave Springfield MA	229	Revenue Recovery, Call Center, Service, Distribution, Engineering and construction, communications, facilities, field collections, fleet, GIS, meter reading, Meter Shop Metering, Sales, Scheduling Stores, Operational Support Service	See UWUA 1-1 (A)	
Open	Lawrence MA-Op Ctr 55 Marston Street Lawrence MA	55	Service, Distribution, Engineering and Construction, Collections, GIS, Meter Reading, Metering, Regulatory, Scheduling, Stores	See UWUA 1-1 (A)	
Open	Taunton MA Ops-Mod Short Street (Rear) Taunton, MA	86 6	Service and Distribution	Included in Brockton staffing levels	Same as above, however, Water Heaters, Boilers and Furnaces not housed at these locations.
Open	Hanover MA-Op Ctr 11 Hanover St Hanover, MA	7	Service and Distribution	Included in Brockton staffing levels	
Open	Wrentham MA-Mod South Street Wrentham, MA	100 2	Service	Included in Brockton staffing levels	
Closed	Franklin MA Ruggles Street Franklin, MA	0	Service (relocated to Wrentham)	Included in Brockton staffing levels	
Open	Easton MA-LNG Plt Eastman St Easton, MA	102 8	Operate and maintain the vaporization facility	Included in Brockton staffing levels	
Open	Northampton MA-LP Plt 351 Earle Street Northampton, MA	9	LPG - Operate and maintain the vaporization facility Operations - Service, Distribution	Included in Springfield staffing levels	
Open	Brockton MA LPG Plt Meadow Ln Oak Hill Way Brockton MA	10 4	Maintain electrical equipment, maintain all equipment at facility,	Included in Brockton staffing levels	
Open	Marshfield MA Enterprise Drive Marshfield MA	0		No employees assigned to this location	General tools and engine oils are stored at the following facilities: Northampton, Brockton, Marshfield, West Springfield and Lawrence.
Open	West Springfield MA Union Street West Springfield, MA	0		No employees assigned to this location	
Open	Lawrence MA - LNG 55 Marston Street Lawrence MA	0	Operate and maintain the vaporization facility	Included in Lawrence staffing levels	
Open	Ludlow MA Ravenwood Drive Ludlow MA	11	LNG - Operate and maintain the vaporization and liquefaction facility, maintain electrical equipment, maintain all equipment at facility,	See UWUA 1-1 (A)	
Closed	Taunton MA 500 Myles Standish Blvd Taunton MA	0	Service and Distribution	Included in Brockton staffing levels	General tools, refrigerant and engine oils are stored at this facility.

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE  
FIRST SET OF INFORMATION REQUESTS FROM LOCAL UWUA 273  
D. T. E. 05-27

Date: July 9, 2005

Responsible: Danny G. Cote, General Manager

- UWUA-1-17 (a) Please name and summarize the various types of reports, studies or analyses the company uses to develop its capital expenditure plans.
- (b) Please provide a copy of each such capital expenditure report, study, analysis or plan for the period January 1, 1998 to present.

Response:

- (a) Bay State Gas generally develops its capital expenditure plan for the upcoming fiscal year based on the historical spending levels from previous years. The capital spending activities are tracked and the latest available information in the current year plus any significant expected changes in the next or future years are used. For example, additional Steel Infrastructure Replacement Program dollars spent in Massachusetts for 2004 and future expected Steel Infrastructure Replacement Program dollars were used to develop the fiscal year 2005 capital expenditure plan. The name of the report that tracks historical spending levels is referred to as the "Capital spending detail by activity".
- (b) See Attachment UWUA-1-13 for Bay State's historic capital spending detail by activity between 1998 and 2004.

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE  
FIRST SET OF INFORMATION REQUESTS FROM LOCAL UWUA 273  
D. T. E. 05-27

Date: July 9, 2005

Responsible: Danny G. Cote, General Manager

UWUA-1-20 (a) Are there Bay State employees whose task, in whole or in part, is to supervise control of corrosion on the company's lines and mains? If yes, please provide a written copy of the job description.

(b) For each year 1998 to present, please list the staffing level for the corrosion supervision function. To the extent the level has changed, please provide all internal written communications regarding any decision to increase or decrease the number of people performing this function.

Response: (a) Yes. See Attachment UWUA-1-20 (a).

(b) Listed below is the Corrosion staff for years 1998 – 2005. Some of the names remain the same but the title might have changed. No internal written communications, regarding any decision to increase or decrease the number of people performing this function, was found.

**Lawrence**

1998 – 2000 Harry Bickford – Corrosion Supervisor  
Robert Rosenstrator – Corrosion Technician

2001 – 2003 Robert Allen – Corrosion Specialist  
2004 – 2005 Robert Allen – Corrosion/Leak Specialist

**Springfield**

1998 – 2000 Kenneth Santucci – Corrosion Supervisor  
Gary Steglinski – Corrosion Supervisor

2001 – 2005 Kenneth Santucci – Corrosion/Leak Specialist

**Brockton**

1998 – 1999 Marty Langelier – Corrosion Supervisor  
Joan Furtado – Corrosion Analyst

2000 Joan Furtado – Corrosion Administrator

2001 – 2003 Joan Furtado – Corrosion Specialist  
2004 – 2005 – Joan Furtado – Corrosion/Leak Specialist

**Title:** Corrosion and Leak Detection Specialist  
**Salary Type:**  
**Market Median:**  
**Process/Sub-Process:**

**Job Code:**  
**Safety Sensitive:**  
**Location:**

**PRINCIPAL OBJECTIVE:** Direct the Corrosion Control and Leak Survey programs efficiently and effectively in order to help maintain D.O.T. compliance and satisfy O & M requirements.

**ESSENTIAL FUNCTIONS:**

- Supervise and/or guide others, responsible for a variety of tasks such as analyzing, advanced troubleshooting, testing, maintaining, installing, repairing, monitoring, preventive maintenance and inspection of the pipeline system to include all functions of cathodic protection and leak surveys.
- Responsible for maintaining all Corrosion Control and Leak Detection records per company requirements.
- Direct and supervise Corrosion Control and Leakage Detection consultants and/or internal company personnel.
- Acts as liaison between company and Federal and State inspectors.
- Provides corrosion and leakage training, guidance and support for the Operations personnel.
- Provide cathodic protection design and field installation and inspection services.
- Applies corrosion control and pipeline integrity methods and technologies.
- Utilize knowledge of measurement, electrical/electronic, and mechanical activities as they relate to maintenance of pipeline corrosion and leak detection.
- Forecast and monitor O & M and capital budgets.
- Direct and provide technical support for construction activities; provide corrosion analysis and recommendations on appropriate materials for projects.
- Provide consultation on coating and material specs for construction projects and assists with coating and material issues during construction.
- Collaborate with operations to identify projects and issues, and recommend solutions.
- Facilitate decisions on pipeline replacement projects as a result of corrosion and leakage.
- Acts as liaison between engineering staff and operations personnel.

**Qualifications:**

- ◆ Preferred 5 or more years experience in cathodic protection, protective coatings and leak detection
- ◆ OQ qualified in Corrosion and Leakage tasks
- ◆ Self-motivated with excellent communication skills, both written and verbal.
- ◆ NACE certified Specialist, Technologist or Level II Cathodic Protection Technician preferred.
- ◆ Able to handle multiple projects, set priorities, track progress and meet deadlines
- ◆ Ability to manage multiple vendor relationships
- ◆ Working knowledge of computer applications
- ◆ Excellent interpersonal skills

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Date**

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE  
THIRD SET OF INFORMATION REQUESTS FROM UWUA LOCAL 273  
D. T. E. 05-27

Date: July 9, 2005

Responsible: Danny G. Cote, General Manager

UWUA-3-48 (Cote, pp. 19-20) Please provide any documents in the nature of work plans, schedules, budgets and related documents regarding the expected efforts to replace old mains in the Brockton division, including projections of Bay State in-house staffing (by job category) required to bid, oversee and implement the work, including all service tie-ins.

Response: Please see Table UWUA-3-48 for a list of all Steel Infrastructure Replacement Program related projects planned in the Brockton division for 2005.

Table UWUA-3-48  
2005 BROCKTON STEEL INFRASTRUCTURE REPLACEMENT  
PROGRAM WORK PLAN

<b>Street Name</b>	<b>City/Town</b>	<b>New Length (Feet)</b>	<b>Retired Length (Feet)</b>	<b>Total # Of Services</b>
Attleboro Springs	Attleboro	720	720	2
Bayberry hill Rd	Attleboro	267	267	1
Choate St	Attleboro	240	240	2
Fisher Ave	Attleboro	665	665	12
Laurier Ave	Attleboro	175	215	2
Locust St	Attleboro	5548	5548	23
Oak Hill Ave	Attleboro	6870	6870	34
Park Street	Attleboro	7755	7755	27
Park Street at Choate St	Attleboro	270	270	2
Prospect Ave.	Attleboro	360	360	3
Raeburn Dr	Attleboro	907	907	1
Rex Ave	Attleboro	175	170	1
Robinson Ave	Attleboro	1200	1138	16
Robinson Ave	Attleboro	2485	2485	24
Starr Lane	Attleboro	700	700	2
Thornton St.	Attleboro	325	325	2
Tyler St.	Attleboro	1223	1223	10

Woodland Lane	Attleboro	400	400	2
West Main St	Avon	360	360	0
Bates St	Brockton	700	700	13
Colonial Terrace	Brockton	200	220	4
Ellis St.	Brockton	280	280	4
Fenway Cir.	Brockton	240	240	6
Forest Rd.	Brockton	815	750	9
Foster St.	Brockton	50	0	0
Golden Circle	Brockton	700	700	8
Irving Street	Brockton	400	400	2
Joslyn Lane	Brockton	160	330	1
Libby St.	Brockton	800	820	7
Loucraft Ave	Brockton	350	340	4
Marion Street	Brockton	450	450	6
Oakland Pl.	Brockton	250	205	2
Pennsylvania	Brockton	325	325	4
Pleasant St.	Brockton	1260	1260	18
Quincy Ave	Brockton	320	0	0
Roan Ct.	Brockton	300	205	4
Sheridan St.	Brockton	750	945	10
Sterling Rd.	Brockton	1000	945	14
Summer St.	Brockton	2500	2500	3
Walnut Ave.	Brockton	320	275	6
Whitman St.	Brockton	130	320	1
Josephine St	Canton	150	150	2
Savin Hill	Canton	380	380	3
Tolman St	Canton	300	300	4
Washington Street	Canton	930	930	9
Washington Street	Canton	680	680	4
Abram's Hill Rd.	Duxbury	2310	2310	19
Alden St	Duxbury	1320	1320	8
Aviary Street	Duxbury	240	240	2
Bay Road	Duxbury	700	700	3
Bumble Bee Lane	Duxbury	756	756	3
Cedar St.	Duxbury	1080	1080	13
Chapel St.	Duxbury	600	600	6
Cove St.	Duxbury	990	990	12
Fairway Ln.	Duxbury	857	857	3
Forthill Lane	Duxbury	505	505	6
Freeman Place	Duxbury	510	510	5
Freindship Lane	Duxbury	534	534	4
Harrison St.	Duxbury	1705	1705	11
Huckleberry Lane	Duxbury	390	390	2
Josseyln Avenue	Duxbury	882	882	13
Linden Lane	Duxbury	756	756	10
Longpoint	Duxbury	624	624	3
Loring St.	Duxbury	1009	1009	4

Lovers Lane.	Duxbury	345	345	4
Lund Lane	Duxbury	510	510	3
Old Cove Rd.	Duxbury	1080	1080	7
Partridge Road	Duxbury	804	804	5
Pine Hill Ave	Duxbury	600	600	4
Plumfield Lane	Duxbury	600	600	3
Private Way off Tremont	Duxbury	300	300	1
Private way off Washington (#397)	Duxbury	380	380	6
River Lane	Duxbury	576	576	3
Shipyards Lane	Duxbury	852	852	13
Short Lane	Duxbury	330	330	3
St George St	Duxbury	5575	5575	37
Sunset Road	Duxbury	1005	1005	9
Surplus St.	Duxbury	2760	2760	25
Tremont St	Duxbury	240	240	1
Tremont St	Duxbury	5200	5200	30
Tremont St	Duxbury	7690	7690	40
Wadsworth Lane	Duxbury	642	642	6
Washington Street	Duxbury	10020	10020	106
Water St.	Duxbury	385	385	7
Winsor Street	Duxbury	490	490	9
Woodridge Road	Duxbury	1782	1782	15
Depot St.	Easton	2365	1935	17
Bassett St.	Foxboro	650	650	5
Bradford Ave	Foxboro	435	435	9
Carpenter St.	Foxboro	745	745	4
Central St.	Foxboro	800	800	7
Central St.	Foxboro	1280	1280	4
Cross St.	Foxboro	223	200	1
Fales St.	Foxboro	150	150	3
Granite St.	Foxboro	4875	4875	36
Gray Rd	Foxboro	180	180	2
Liberty Street	Foxboro	195	195	2
North St.	Foxboro	4300	4140	8
Park Ave.	Foxboro	235	235	1
Payson Rd.	Foxboro	1090	1090	1
Pond Ave	Foxboro	400	400	3
Walnut St	Foxboro	1260	1260	2
A Street	Franklin	510	510	3
Alpine Place	Franklin	780	780	19
Beaver St.	Franklin	720	720	3
Beaver St.	Franklin	530	530	5
Charlotte Ct.	Franklin	220	220	7
Chestnut St.	Franklin	3440	3440	26
Corbin St.	Franklin	690	690	9
Dale St	Franklin	930	930	15

Dean Ave.	Franklin	1225	1225	19
Dean Ave. Ext	Franklin	240	240	4
East Central St.	Franklin	2650	2650	15
East St.	Franklin	680	600	4
Fales St.	Franklin	825	825	6
Hillside Rd.	Franklin	420	420	5
James St.	Franklin	246	246	2
Main St.	Franklin	1254	1254	3
Martin Ave.	Franklin	300	300	2
Orchard St.	Franklin	480	480	6
Park Rd.	Franklin	140	140	2
Park Rd.	Franklin	225	225	2
Pleasant St.	Franklin	1740	1740	23
Reid Ave	Franklin	270	270	2
Ruggles St.	Franklin	728	728	12
Stubb Ave	Franklin	405	405	2
Summer St.	Franklin	1728	1728	22
Spring St	Hanover	4050	4050	25
Big Rock Lane	Hanson	580	275	3
High St.	Hanson	4365	4365	24
Morini Street	Mansfield	215	215	2
Willow Street	Mansfield	252	252	4
Landing Road	Marshfield	18	11	0
Awl St.	Medway	30	30	0
Brigham St.	Medway	970	970	5
Broad St.	Medway	180	180	1
Cottage St	Medway	474	474	4
Country Lane	Medway	200	180	1
Cutler St	Medway	492	492	2
High St.	Medway	1620	1620	13
Highland St.	Medway	860	860	10
John St.	Medway	370	370	7
Main St.	Medway	4365	4440	34
Mann St.	Medway	30	30	0
Phillips St.	Medway	628	628	7
Roche Estates	Medway	30	30	0
Sanford St.	Medway	540	540	1
Village St.	Medway	30	30	0
Wellington St.	Medway	1300	1300	8
Wellington St.	Medway	30	30	0
West St.	Medway	875	0	0
South Wocester St	Norton	6040	6040	37
West Main St	Norton	3005	3005	13
West Main St	Norton	5395	5395	43
Howard St	Randolph	930	930	15
North St.	Randolph	1860	1860	13
Plain St	Randolph	780	780	11



Booth Hill Rd	Scituate	1750	1750	13
Booth Hill Rd	Scituate	150	150	0
Brown Ave.	Scituate	240	240	4
Conroy Terr.	Scituate	370	300	3
Country Way	Scituate	3078	3078	15
Country Way	Scituate	5952	5952	38
Country Way	Scituate	3000	2900	22
Country Way	Scituate	760	760	8
Curtis Street	Scituate	705	705	6
Edward Foster Road	Scituate	2245	2245	18
Edward Foster Road	Scituate	1200	1200	2
Egypt Ave	Scituate	300	300	9
Egypt Beach Rd.	Scituate	1300	1300	8
First Parish Road	Scituate	2460	2460	11
Gridley Bryant Rd.	Scituate	30	30	0
Grove Street	Scituate	2720	2724	5
Lincoln Park	Scituate	30	30	0
Lynda Lane	Scituate	550	560	2
Mann Hill Rd.	Scituate	1110	1110	2
Private Way	Scituate	30	30	0
Rocky Hill Circle	Scituate	195	192	1
Studley Royal St.	Scituate	435	435	5
Thomas Clapp Rd.	Scituate	2160	2160	10
Utility Rd.	Scituate	600	600	3
Ipswich St.	Seekonk	825	825	11
Bayberry Dr.	Sharon	30	30	0
Billings St	Sharon	260	260	4
Chive Dr.	Sharon	30	30	0
East Foxboro Street	Sharon	1256	1265	3
Gabriel Rd	Sharon	30	30	0
Harold St.	Sharon	1935	1935	27
Maskwonicut Street	Sharon	770	770	2
Meadow Rd.	Sharon	150	150	2
N. Main St.	Sharon	5200	5200	34
Nasir Ahmad Rd.	Sharon	30	30	0
Stone St	Sharon	100	100	3
Holebrook Ave	Stoughton	275	270	2
Lipsky Way	Stoughton	260	260	2
Pearl St	Stoughton	1808	1808	28
Water St.	Stoughton	448	303	4
Beacon St.	Taunton	1180	1180	8
Clay St	Taunton	280	370	2
Harvard St.	Taunton	460	490	5
Meadow Place	Taunton	165	165	2
Middleboro Ave	Taunton	1980	1980	9
Parker Terr.	Taunton	300	330	5

Plain St	Taunton	1415	1415	26
Seventh St	Taunton	370	370	3
Somerset Ave	Taunton	2880	2880	25
Winthrop St.	Taunton	3875	3875	13
Riverside Place	Walpole	830	830	17
Ash St	West Bridgewater	580	600	2
Bryant St	West Bridgewater	210	210	2
South Main St.	West Bridgewater	1199	1199	7
South Main St.	West Bridgewater	910	910	1
W Center St	West Bridgewater	1000	1000	5
Winter St	Wrentham	1180	1180	8

Future work plans, schedules and budgets to replace unprotected steel mains are determined by leakage history and municipal street reconstruction.

Typically the detailed main replacement plans related to the SIR program for each year are developed during the preceding late fall and winter months.

Based on the 2005 work plan, on average the following company personnel are assigned to the Steel Infrastructure Replacement Program:

- 10 Inspectors
- 5 Pipe Fitters
- 3 Welders
- 2 Tie-In Crew Leaders
- 5 Distribution Operators
- 2 Construction Supervisors
- 1 Resource Planner
- 2 Administrative Clerks
- 4 Engineers
- 1 Mapping Technician

Staffing levels for the future years of the program will be determined after the Company reviews the 2005 actual experience.